LICENSE NUMBER 729641

June 25, 2005

#### Mr. Arman Toumari

California Regional Water Quality Control Board Los Angeles Region 320 West 4th Street, Suite 200 Los Angeles, California 90013

RE: **G&M Oil Company Station #51** 

2155 South Atlantic Boulevard Commerce, California *Transmittal of Site Conceptual Model Update* 

Dear Mr. Toumari:

On behalf of the property owner/operator, Atlas Environmental Engineering, Inc. (ATLAS) presents this update to the Site Conceptual Model (SCM) for the subject site (Figures 1 and 2). This SCM update has been prepared with the aid of the non-steady state spreadsheet analytical model developed by Messrs. Tom Shih and Yue Rong of the Los Angeles Regional Water Quality Control Board (LARWQCB). The model is intended to delineate the surface and subsurface conditions at the site and near vicinity, define the constituents of concern and their existing as well as projected distribution, and identify any existing and/or potential receptors. In addition, the model can be utilized to identify other possible environmental concerns that need to be addressed. This SCM was prompted by the LARWQCB letter of February 10, 2004. The following sections present a brief description of the site characteristics, model assumptions, input data, model results and a discussion. Please note that much of the descriptive and historic site information has been presented in the "Preliminary Site Conception Model" (PSCM) and it has not been included in this update.

#### WELLS AND CONDUITS

Based on data provided by the Los Angeles County Hydrogeologic Unit, there are seven (7) active wells within a one-mile radius of the site. The well data is summarized in **Table 1**.

Well 2839C (No. 02S12W08P01S) is the nearest well and is located approximately 1,600-feet from of the site. There are no known oil wells on the subject site.

Based on the depth to groundwater the existing utilities at the site should not act as a potential conduit for transport of contaminants.

There are presently no known active or potentially active faults in the current Alquist-Priolo designated areas. However, the site is within an area designated as a potential liquefaction hazard zone.

#### GROUNDWATER FLOW DIRECTION AND GRADIENT

On April 4, 2005, depth to groundwater beneath the site ranged from approximately 87- to 88-feet below the top of the well casings. Light non-aqueous phase liquid (LNAPL) has been effectively reduced at the site and has not been present at the site since the 4<sup>th</sup> quarter 2004 sampling event. The groundwater depth data collected was used to determine the groundwater flow direction and gradient across the site. Based on the data collected by ATLAS, the flow direction across the site is southwesterly at a gradient of approximately 0.02. A groundwater elevation contour map is presented on **Figure 3**. Groundwater monitoring data is presented in **Table 2**. Status reports, field data, and sampling procedures are included in **Appendix A**.

#### **GROUNDWATER ANALYTICAL RESULTS**

Groundwater samples were collected from all wells on April 4, 2005 and submitted to Southland Technical Services, Inc. for analysis. The groundwater samples were analyzed for TPHg and TPHd by EPA Method 8015M and for BTEX plus fuel oxygenates by EPA Method 8260B. Concentrations of TPHg ranged from 58.5  $\mu g/L$  to 10,600  $\mu g/L$ ; BTEX ranged from <1  $\mu g/L$  to 1,970  $\mu g/L$ ; MTBE ranged from <2.0  $\mu g/L$  to 1,560  $\mu g/L$ ; and TBA concentrations ranged from <10  $\mu g/L$  to 685  $\mu g/L$ . TPHd, ETBE, DIPE and TAME were not detected at concentrations exceeding the laboratory detection limits. A summary of groundwater analytical and water quality data is presented in **Table 2**. Field Data and Project Status Reports are included in **Appendix A**. Complete labratory reports are presented in **Appendix B**.

#### **ESTIMATION OF RELEASE MASS**

Currently, there are no records available indicating the mass of the release. One documented unauthorized release was initially discovered during failed tank testing conducted by other consultants and verified during a preliminary site investigation performed by ATLAS in 1997. The investigation was limited to the area of the diesel tank pits in the southwest corner

of the property. The release was reported by G&M Oil Company. In 1999, during underground storage tank (UST) removal activities, significant levels of TPHg and TPHd were detected from beneath the USTs located in the north corner of the property. **Figures 4** through **13** present the isoconcentration plots for TPHg, benzene, toluene, ethylbenzene, total xylenes, MTBE, DIPE, ETBE, TAME and TBA using the most current groundwater monitoring data. MTBE concentrations versus time have also been plotted for groundwater monitoring wells MW-3 and MW-12, which are presented as **Figures 14** and **15**.

#### SOURCE REMOVAL/REMEDIATION ACTIVITES

During May 1999, the former USTs were removed and replaced with double walled storage tanks. During tank removal/replacement activities, approximately 357 tons of petroleum hydrocarbon affected soil was removed from the site.

From September 28, 2004 to September 30, 2004, ATLAS conducted soil vapor extraction (SVE) and aquifer characterization pilot tests. The pilot tests were conducted to determine the optimum soil vapor and groundwater extraction rates to maintain adequate control over the site. The highest vapor concentrations were noted in VW-2S (screened from 20- to 40-feet bgs) with concentrations of TPHg at 54,800 ppmv, BTEX at 2,010 ppmv, MTBE at 545 ppmv, ETBE at <21.50 ppmv, DIPE at 44.9 ppmv, TAME at <21.50 ppmv and TBA at <151.5 ppmv. The highest concentration in the deeper screened wells was observed in VW-1D (screened from 50- to 80-feet bgs) with concentrations of TPHg at 26,400 ppmv, BTEX at 523 ppmv, MTBE at 91.2 ppmv, ETBE at <10.75 ppmv, DIPE at 19.1 ppmv, TAME at <10.75 ppmv and TBA at <75.75 ppmv. Detailed results are included in the ATLAS report titled, "Site Conceptual Model Update and Report of Feasibility Study", dated October 15, 2004. Using the average soil vapor concentration based on the laboratory data, the initial hydrocarbon-loading rate is expected to be 534 lbs/day.

#### ANALYTICAL MODEL DATA INPUT/ASSUMPTIONS

Messrs. Tom Shih and Yue Rong, with LARWQCB, developed the model utilized for the conditions at the subject site. The non-steady state analytical model is used to predict the plume travel time required to reach a down-gradient receptor, usually an online domestic supply well. Of importance in this study is the additive MTBE. The model is based on a finite mass advection-dispersion partial-differential equation for contaminant transport processes in groundwater. For the model to provide adequate results several assumptions were made, they are:

Non-steady state (concentration is a function of time),

- ❖ Initial mass discharged is finite and instantaneously introduced as a slug,
- Homogenous aquifer properties,
- No change in groundwater flow direction and velocity,
- ❖ The dispersion coefficients are constant and proportional to the velocity (dynamic dispersion regime), and
- ❖ Contaminant natural degradation is not considered (e.g., no sorption or biodegradation).

#### **SENSITIVITY ANALYSIS**

Following the selection of initial input parameters, the model is calibrated by adjusting the data within reasonable ranges to model predictions. Three (3) parameters that significantly effect the output are the longitudinal dispersivity, groundwater velocity and mass of discharge per unit depth. Therefore, several model runs are completed with these values changed to adjust the model predictions to the measured field data. The input data presented below is a result of the model sensitivity adjustments.

#### SITE SPECIFIC INPUT DATA

The site-specific data is included in **Appendix** C. The two (2) wells utilized for the model predictions were MW-3 and MW-12. The site is depicted on **Figure 1** in relation to the domestic well (sensitive receptor). Based on the data input, the concentration profiles were completed for the two wells which established MTBE concentration profile for the drinking water well (sensitive receptor). **Figure 14** presents a graph of "Field Data and Model Predicated Time vs. MTBE Concentration Profile for Down-Gradient MW-3". **Figure 15** presents a graph of "Field Data and Model Predicated Time vs. MTBE Concentration Profile for Down-Gradient MW-12". **Figure 16** presents "Model Predicted Time vs. MTBE Concentration Profile for Drinking Water Well".

#### RESULTS/DISCUSSION

Based on the input data and model output results, the plume has the potential to reach the sensitive receptor within 28,000 days with a MTBE concentration of less than 5  $\mu$ g/L. Therefore, the likelihood of the existing release (plume) to impact the domestic well at significant contaminant concentrations is remote. Continued quarterly updates of the model predictions will be provided, as needed, using the groundwater monitoring data.

ATLAS proposed the installation of a dual phase extraction remediation system in the report titled "Site Conceptual Model Update and Final Remedial Action Plan", dated January 15, 2005. Currently, ATLAS is in the process of designing the system and piping layouts for the

subject site. Once approval is received from the LARWQCB, ATLAS will submit design plans to the City of Commerce.

#### **CLOSING**

The work conducted by ATLAS has been performed using generally accepted methods and procedures in the environmental field. ATLAS makes no other warranty, either expressed or implied, concerning the information that is contained within this report. The analysis of the samples were conducted by a California Certified Laboratory, however, no warranty as to the validity of the work conducted by the independent laboratory is implied.

Due to the changing subsurface environment, continuing assessments and/or excavation projects may reveal findings that are different than those which are presented herein. This facet of the environmental profession should be considered when basing professional opinions on limited data collected from the projects performed.

This report is valid as of this date. As a result of the passage of time and changing site conditions or integrity of the USTs, piping, dispensing equipment and monitoring wells, deviations to the information contained in this report may occur. Accordingly, information presented in later reports may invalidate this report in partial or whole form. These conditions are beyond the control of ATLAS, and should be considered in basing continuing assessments on the information contained herein after the passage of time.

This report has been prepared by ATLAS for G&M Oil Company. Submission of this report to the appropriate regulatory agencies/parties is recommended and considered the responsibility of G&M Oil Company.

Respectfully submitted,

ATLAS ENVIRONMENTAL ENGINEERING, INC.

Karen Bennett-Blanchard

Project Geologist

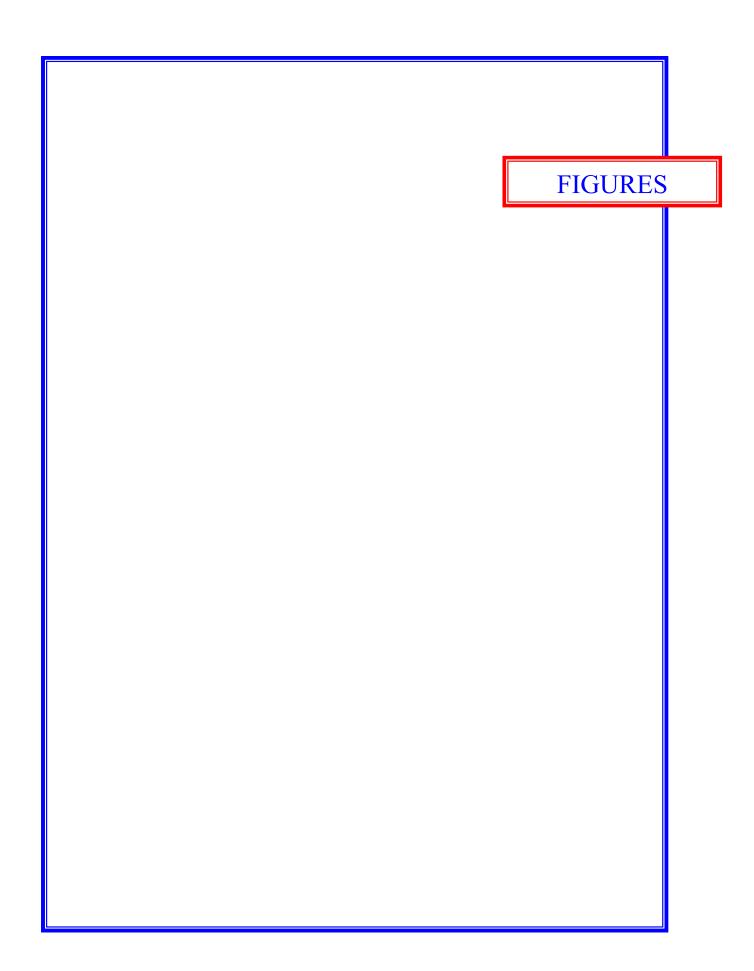
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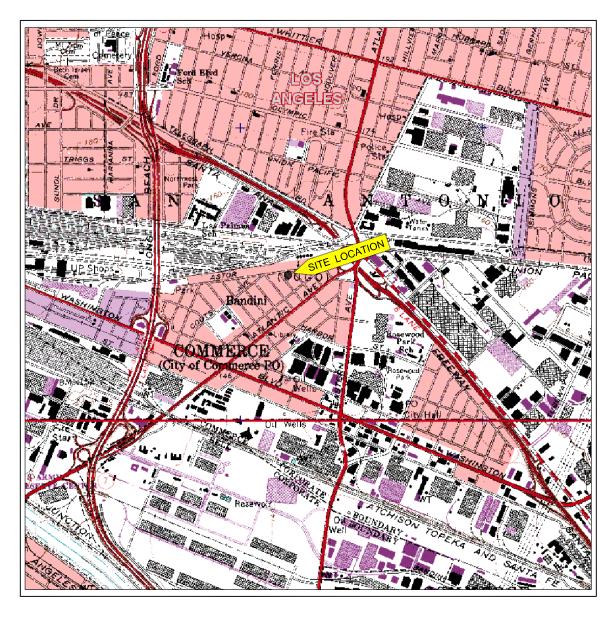
Lloyd Guss, P.G. (7043)

Senior Geologist/Project Manager

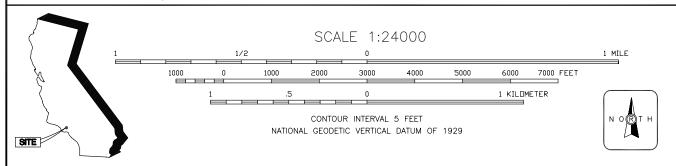
OYD D. GUS No. 7034

Ms. Jennifer L. Talbert, G&M Oil Company, Inc. (w/2 enclosures)





SOURCE: USGS 7.5 minute topo map, Los Angeles Quadrangle 1964, Photorevised 1994, 3—D TopoQuads, Delorme, 1999





15701 CHEMICAL LANE HUNTINGTON BEACH, CA 92649 PHONE: (714) 890-7129

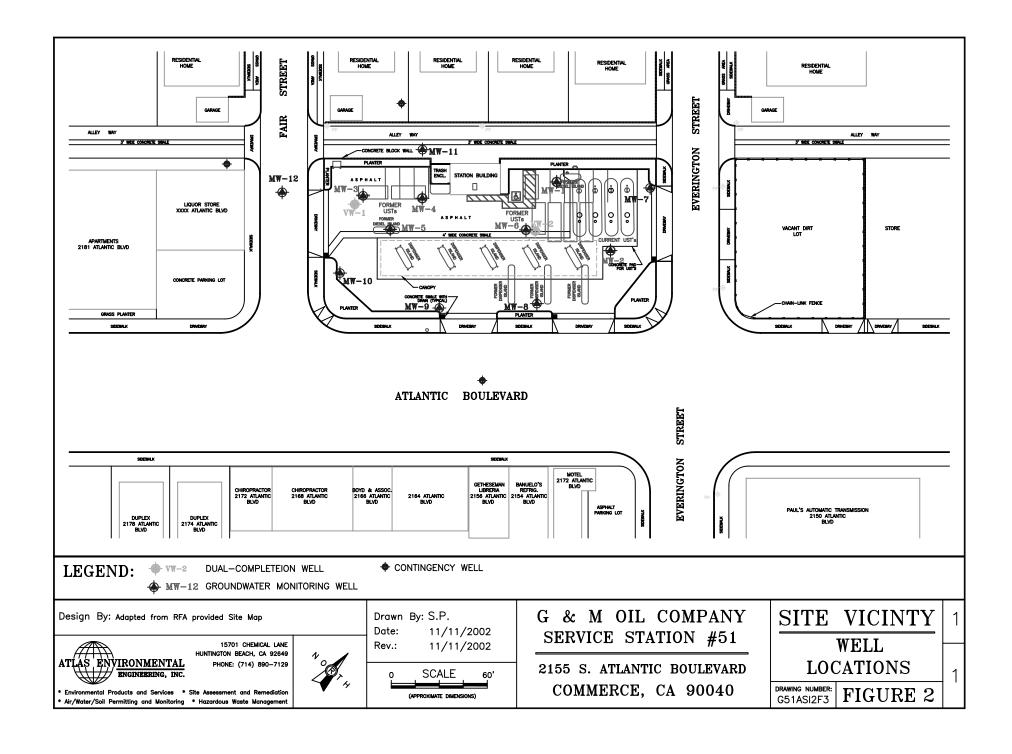
G&M OIL COMPANY, INC. SERVICE STATION #51

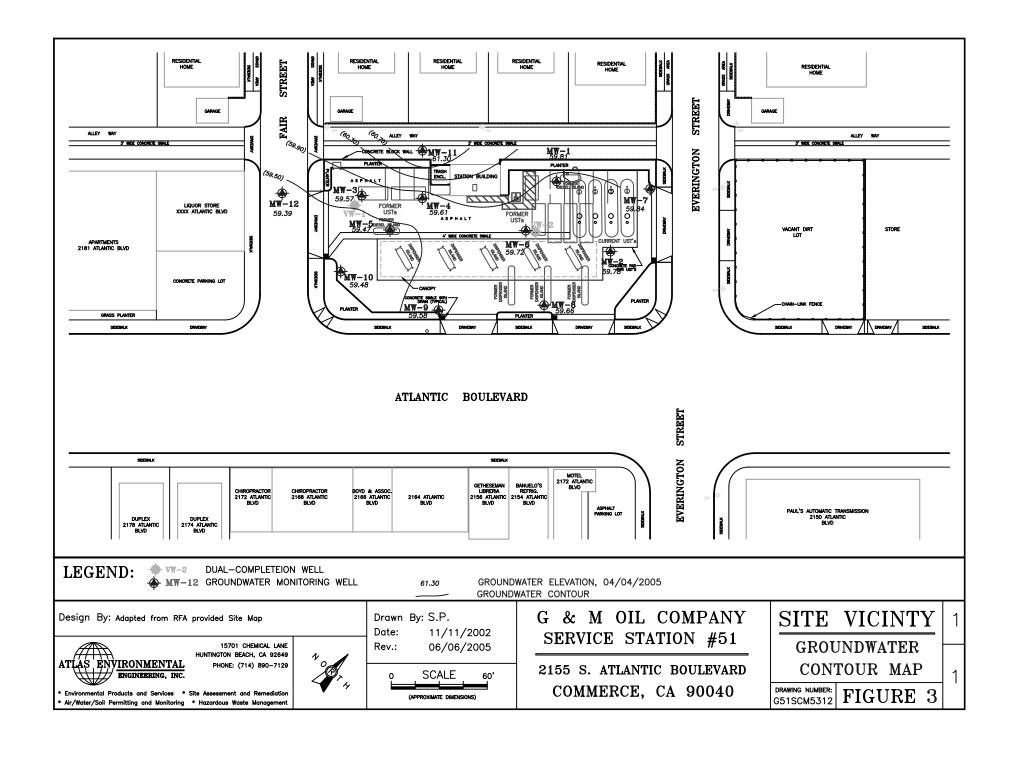
2155 SOUTH ATLANTIC BOULEVARD COMMERCE, CALIFORNIA

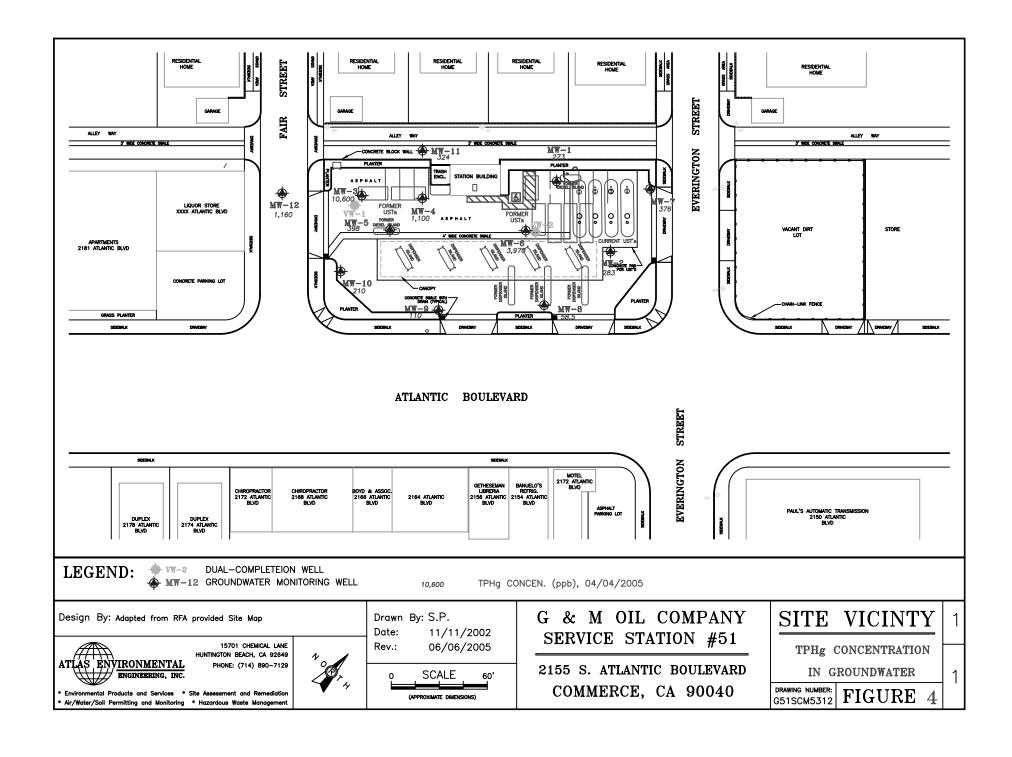
# SITE LOCATION MAP

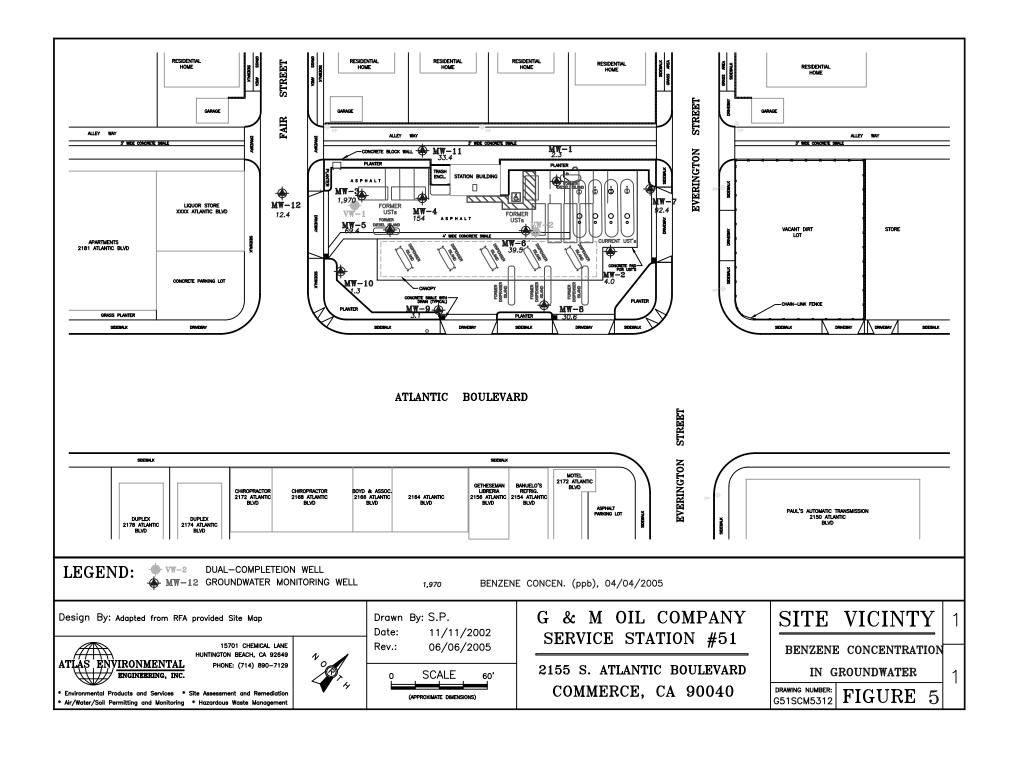
DRAWING NUMBER: GM51SLMF1 FIGURE 1

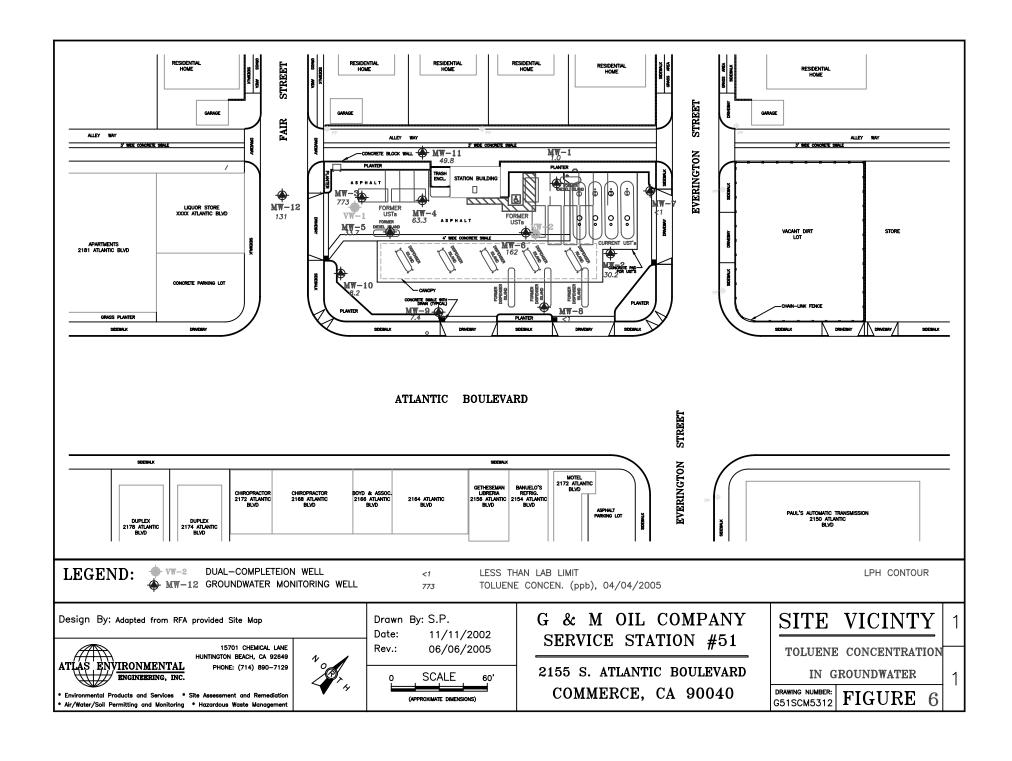
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 \* Air/Water/Soil Permitting and Monitoring
 \* Hazardous Waste Management

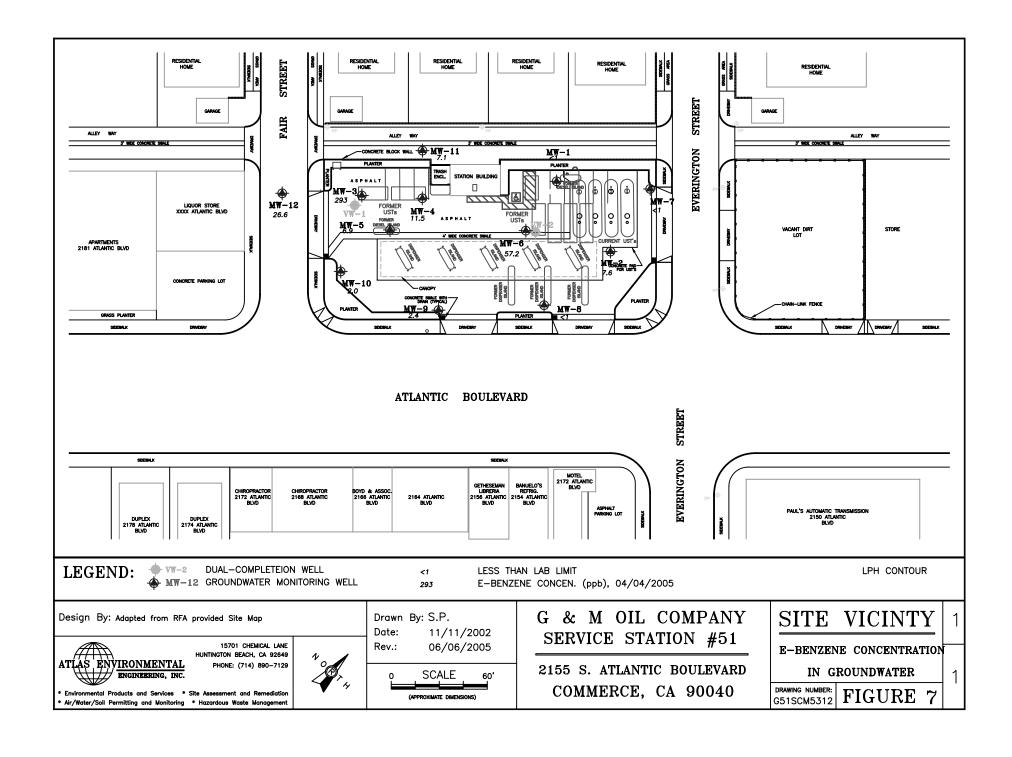


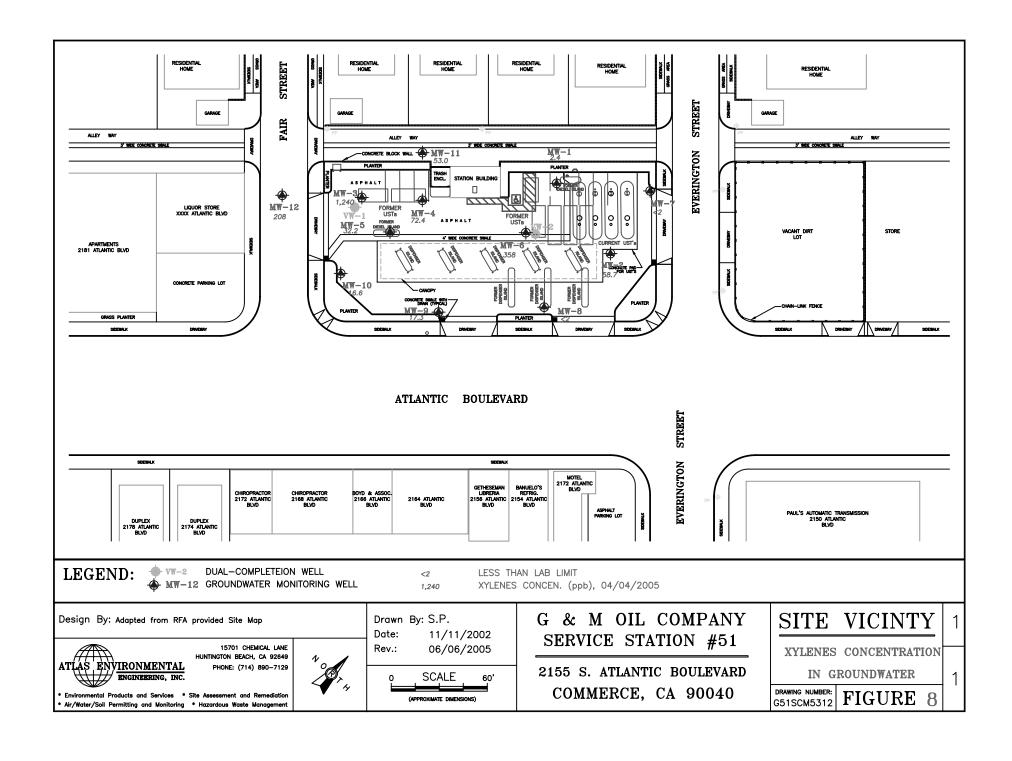


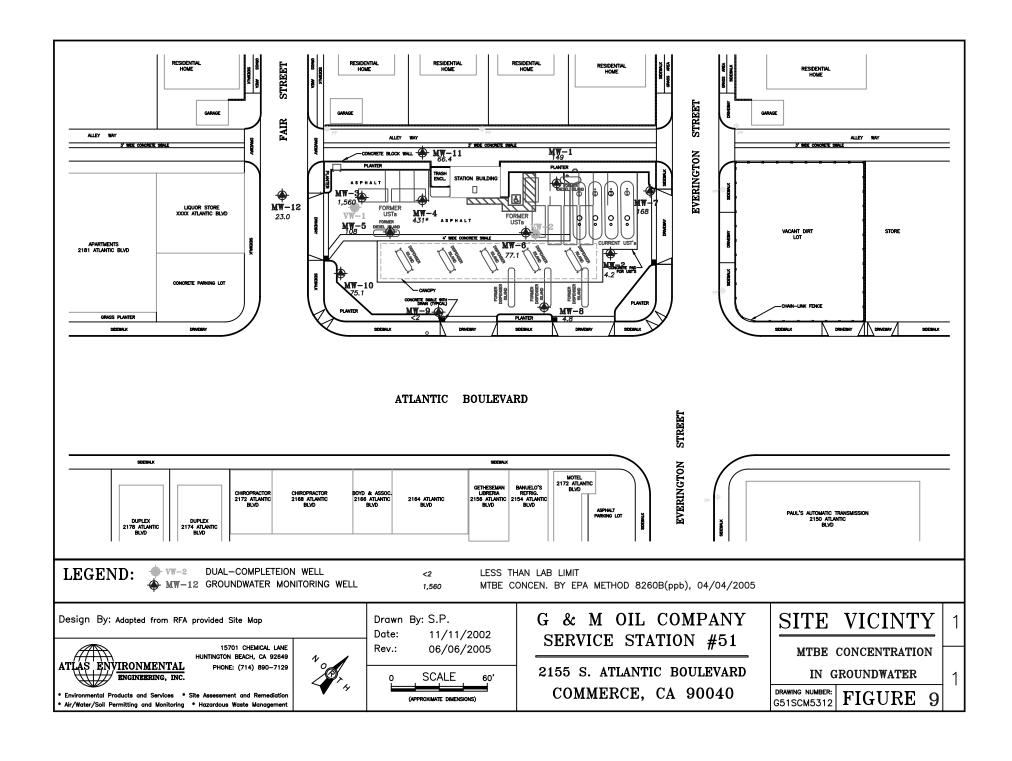


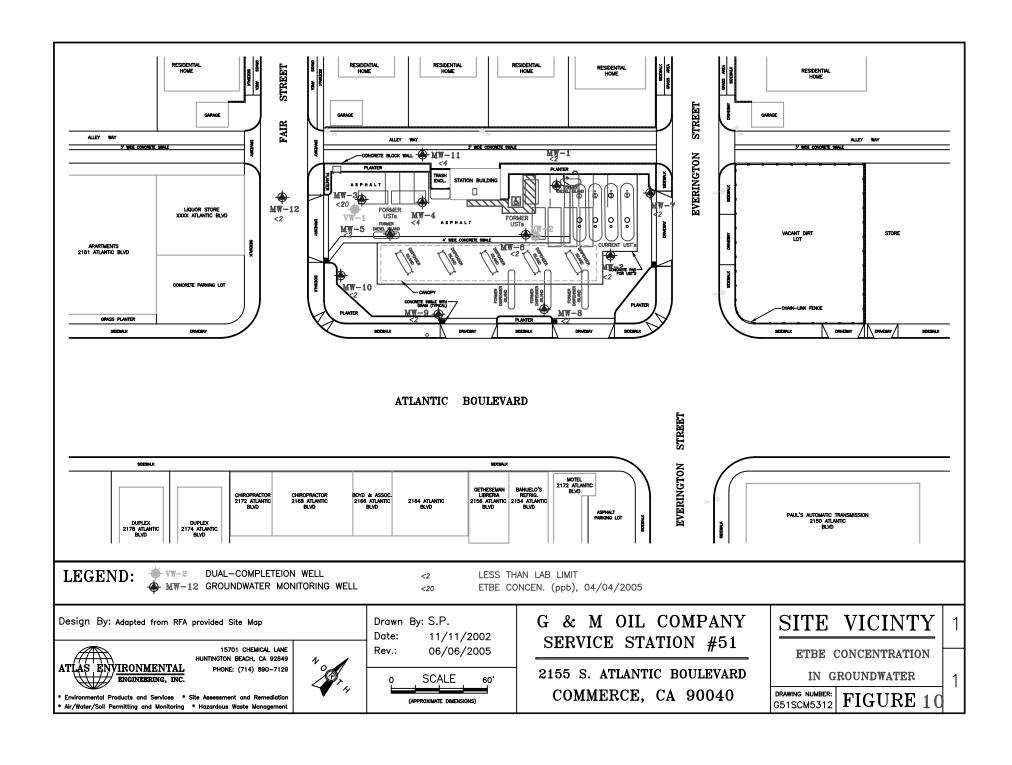


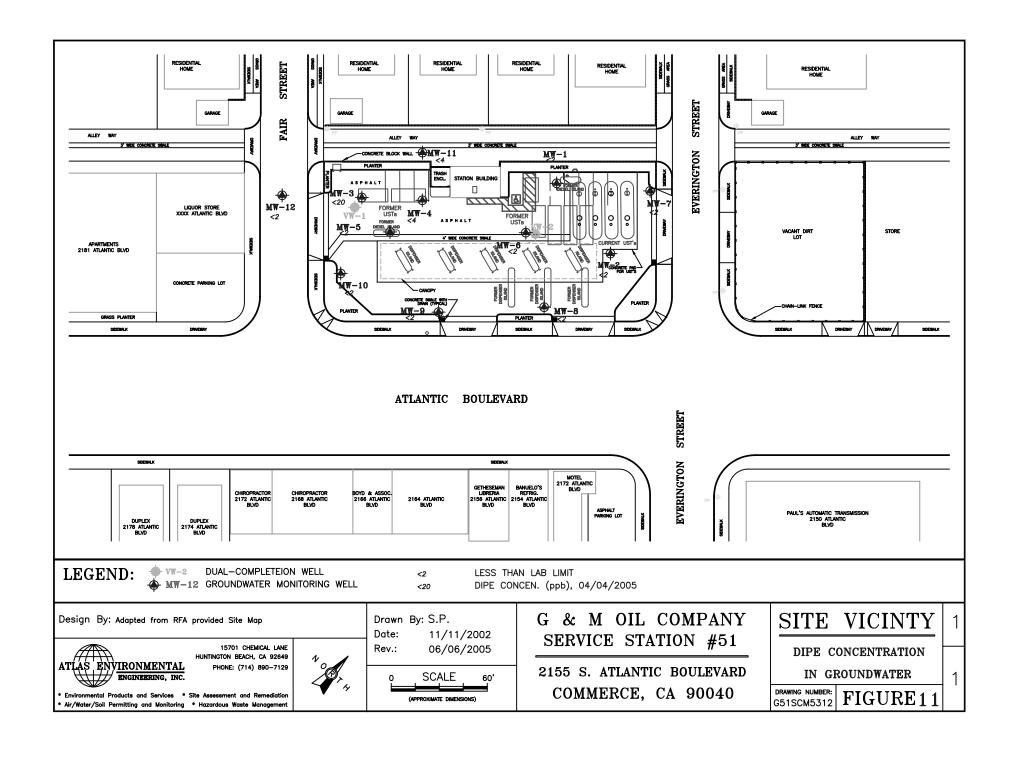


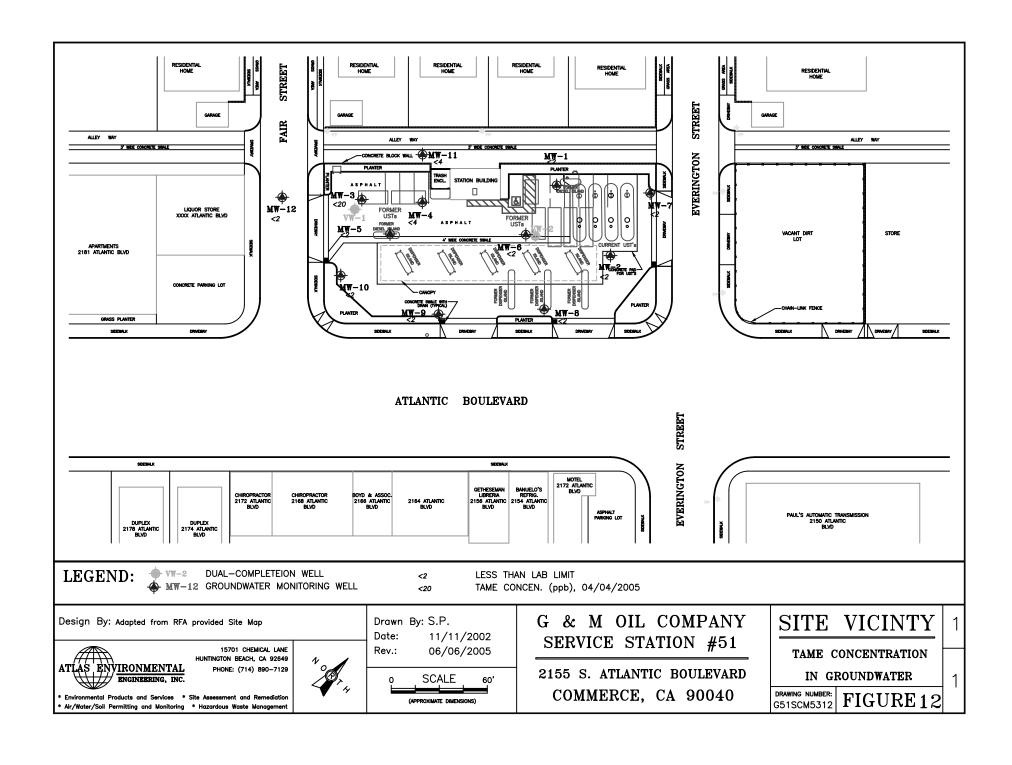












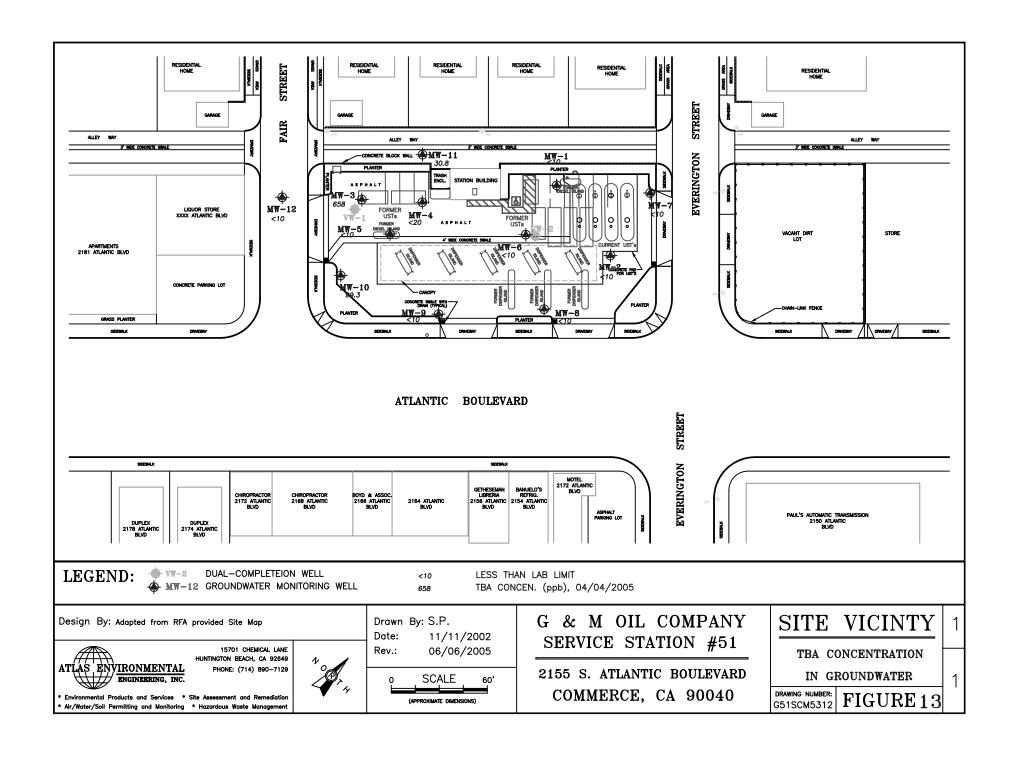


Fig. 14 Field Data and Model Predicted Time Vs. MTBE Concentration **Profile for Down-Gradient MW-3** Concentration (ug/L) Time (days) - VWE-2 (Model Prediction) -■- VWE-2 (Field Data)

Fig. 15 Field Data and Model Predicted Time Vs. MTBE Concentration **Profile for Down-Gradient MW-12** 300000 Concentration Time (days) - MW-2 (Model Prediction) -■- MW-2 (Field Data)

Fig. 16 Model Predicted Time Vs. MTBE Concentration Profile for **Drinking Water Well** 0.00001 0.000009 8000000.0 Concentration (ug/L) 0.000007 0.0000006 0.000005 0.000004 0.0000003 0.0000002 0.000001 0 10000 20000 30000 40000 50000 60000 70000 0 Time (days)

→ Drinking Water Well (Model Prediction)

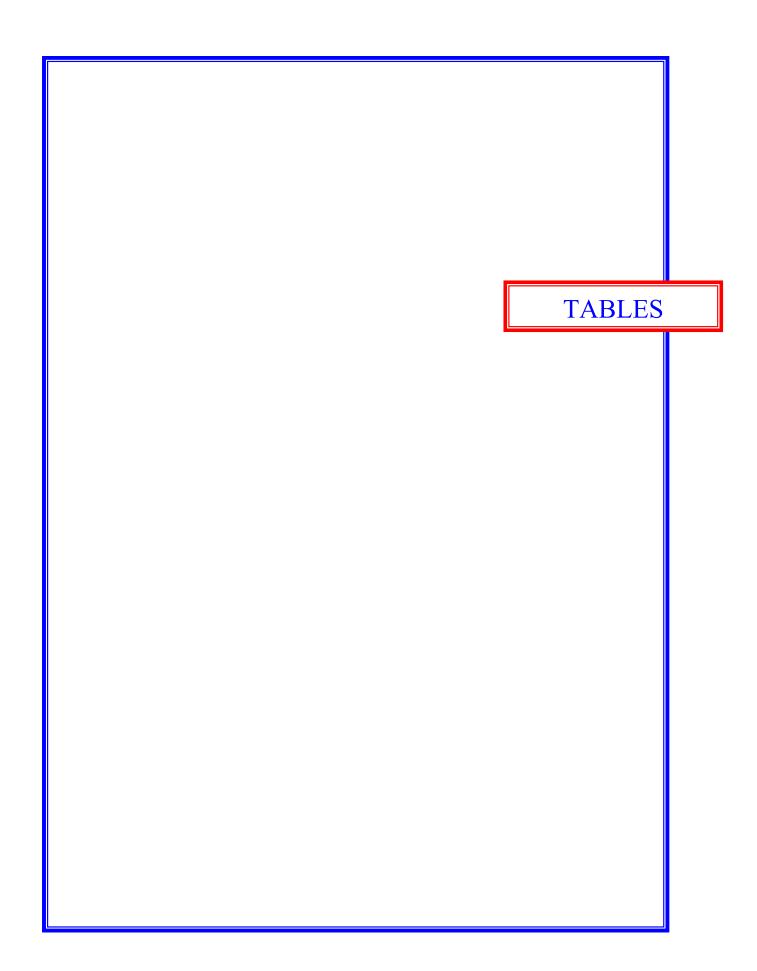


TABLE 1

#### REGIONAL PRODUCTION WELL DATA

## G&M OIL COMPANY, INC., SERVICE STATION #51

## COMMERCE, CALIFORNIA

Well Number	Well Number	Date	DTW	Surface Elev.	Water Elev.	MTBE
(LA County)	(State)		(ft.)	(ft.)	(ft.)	
2828C	2S12W07G01	10/31/2003	98.0	168.8	70.8	N/A
2838A	2S12W07H01	10/31/2003	181.0	174.2	-6.8	N/A
2839A	2S12W17D02	10/31/2003	99.0	144.7	45.7	N/A
2839B	2S12W17D02	4/30/2003	158.0	146.1	-11.9	N/A
2839C	2S12W08P01	4/30/2003	154.0	148.4	-5.6	N/A
2859	2S12W09M01	10/10/2000	121.0	160.0	39.0	N/A
2859A	2S12W09M02	10/10/2000	126.0	160.4	34.4	N/A

Note: Gauging data from Los Angeles County Public Works, Hydrologic Div. and analytical data from California Water Quality Monitoring Database.

N/A - Not Available

## G&M OIL CO. STATION #51

COMMERCE, CA

(Concentration,  $\mu$  g/L)

Well	Date	SWE	DTW	PT	E-WATER	TPHg	TPHd	Benzene	Toluene	E- Benzene	Xylenes	MTBE	MTBE (8260)	ETBE	DIPE	TAME	T-Butyl Alcohol
MW-1	5/28/2002	148.21	86.14	0.00	62.07	621	<500	118	28.3	4.7	58.3		129	<2	<2	<2	34.7
MW-1	8/27/2002	148.21	86.23	0.00	61.98	433	< 500	31.0	2.1	<1	5.8		113	<2	<2	<2	53.2
MW-1	11/6/2002	148.21	86.61	0.00	61.60	3670	< 500	224	9.3	3.4	18.0		806	<4	<4	<4	42.0
MW-1	2/7/2003	148.21	86.73	0.00	61.48	2780	< 500	144	23.0	5.0	43.0		1640	<4	<4	<4	135
MW-1	5/5/2003	148.21	86.91	0.00	61.30	1670	< 500	66.8	27.6	8.8	39.4		1220	<4	<4	<4	29.1
MW-1	7/22/2003	148.21	86.99	0.00	61.22	6950	< 500	515	123	< 50	176		5930	<100	<100	<100	< 500
MW-1	10/22/2003	148.21	87.23	0.00	60.98	3830	< 500	195	26.0	15.0	40.5		2160	<10	<10	<10	< 50
MW-1	1/26/2004	148.21	87.55	0.00	60.66	2460	< 500	112	40.0	<20	90.0		1300	<40	<40	<40	<200
MW-1	*5/12/2004	148.21	87.64	0.00	60.57	1810	< 500	122	47.3	13.1	41.9		1080	<2	<2	<2	<10
MW-1	8/16/2004	148.21	87.82	0.00	60.39	5070	< 500	494	80.6	40.8	123		3690	<20	<20	<20	<100
MW-1	10/22/2004	148.21	88.14	0.00	60.07	4670	< 500	94.7	6.2	<5	<10		587	<10	<10	<10	< 50
MW-1	2/4/2005	148.21	88.29	0.00	59.92	4150	< 500	221	416	<10	450		1680	<20	<20	<20	<100
MW-1	4/4/2005	148.21	88.40	0.00	59.81	273	< 500	2.3	1.0	<1	2.4		149	<2	<2	<2	<10
MW-1		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
SWE	- Surveyed	Well Elev	ation.	TPHg	- Total Petro	leum Hyd	drocarbor	ns as gasolir	ne, EPA 801	5M. DIPE	- Di-	isopropyl e	ther.				Page 1 of 9
DTW	- Depth To	Water.		TPHd	- Total Petro	leum Hy	drocarbor	ns as diesel,	EPA 8015	ETBI	E - Etl	nyl tertiary-	butyl ether.				
PT	- Product 1	Thickness	(apparent).	MTBE	- Methyl ten	tiary butyl	ether.			TBA	- T-b	utyl alcoho	l.				
E-Wate	r - Groundwa	ater elevat	ion.	<	- Less than I	aboratory	detectio	n limits.		LPH	- Liqu	uid-Phase I	Hydrocarbor	ns.			

- Sampled on Alternate Date

- Obtained from a Higher Dilution

- Not analyzed.

μg/L

- Micrograms per Liter.

NA

- Not Available.

TAME - Tert-amyl methyl ether.

## G&M OIL CO. STATION #51

COMMERCE, CA

(Concentration,  $\mu$  g/L)

Well	Date	SWE	DTW	PT	E-WATER	TPHg	TPHd	Benzene	Toluene	E- Benzene	Xylenes	MTBE	MTBE (8260)	ETBE	DIPE	TAME	T-Butyl Alcohol
MW-2	5/28/2002	148.07	85.93	0.00	62.14	614	<500	28.7	17.1	8.0	115		20.2	<2	<2	<2	<10
MW-2	8/27/2002	148.07	85.99	0.00	62.08	111	< 500	14.2	1.4	1.3	8.5		3.0	<2	<2	<2	<10
MW-2	11/6/2002	148.07	86.42	0.00	61.65	57.0	< 500	9.0	1.8	1.1	3.9		3.0	<2	<2	<2	<10
MW-2	2/7/2003	148.07	86.52	0.00	61.55	101	< 500	1.0	6.3	7.3	24.4		5.3	<2	<2	<2	<10
MW-2	5/5/2003	148.07	86.69	0.00	61.38	146	< 500	11.2	9.1	5.4	22.3		7.5	<2	<2	<2	<10
MW-2	7/22/2003	148.07	86.81	0.00	61.26	233	< 500	15.6	18.7	6.0	30.2		11.6	<2	<2	<2	<10
MW-2	10/22/2003	148.07	87.04	0.00	61.03	73.0	< 500	5.7	2.7	2.6	8.5		<2	<2	<2	<2	<10
MW-2	1/26/2004	148.07	87.42	0.00	60.65	52.0	< 500	5.9	2.9	2.1	9.9		<2	<2	<2	<2	<10
MW-2	*5/12/2004	148.07	87.46	0.00	60.61	93.0	< 500	9.0	5.1	3.0	12.7		2.3	<2	<2	<2	21.6
MW-2	8/16/2004	148.07	87.65	0.00	60.42	183	< 500	<1	<1	<1	<2		2.4	<2	<2	<2	<10
MW-2	10/22/2004	148.07	88.00	0.00	60.07	<50	< 500	5.3	2.9	<1	6.4		<2	<2	<2	<2	<10
MW-2	2/4/2005	148.07	88.14	0.00	59.93	123	< 500	2.1	17.3	<1	28.9		<2	<2	<2	<2	<10
MW-2	4/4/2005	148.07	88.29	0.00	59.78	283	< 500	4.0	30.2	7.6	58.7		4.2	<2	<2	<2	<10
MW-2		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
SWE	- Surveyed Well Elevation. TPHg - Total Petroleum Hydrocarbons as gasoline, EPA 8										- Di	isopropyl e	ether.				Page 2 of 9
DTW	- Depth To	Water.		TPHd	- Total Petro	leum Hy	drocarbor	ns as diesel,	EPA 8015	ETBI	E - Eti	nyl tertiary-	butyl ether.				
PT	- Product	Thickness (	(apparent).	MTBE	- Methyl terl	iary buty	ether.			TBA	- T-b	utyl alcoho	l.				
E-Wate	r - Groundw	ater elevat	ion.	<	- Less than I	aborator	detectio	n limits.		LPH	- Liqi	uid-Phase	Hydrocarbor	ns.			

- Not analyzed.

 $\mu$  g/L

- Micrograms per Liter.

NA

- Not Available. TAME - Tert-amyl methyl ether. - Sampled on Alternate Date

- Obtained from a Higher Dilution

# G&M OIL CO. STATION #51

COMMERCE, CA

(Concentration,  $\mu$  g/L)

Well	Date	SWE	DTW	PT	E-WATER	TPHg	TPHd	Benzene	Toluene	E- Benzene	Xylenes	MTBE	MTBE (8260)	ETBE	DIPE	TAME	T-Butyl Alcohol
MW-3	5/28/2002	147.89	86.04	0.00	61.85	6370	< 500	809	362	75.0	670		619	<100	<100	<100	< 500
MW-3	8/27/2002	147.89	86.15	0.00	61.74	8210	< 500	690	295	65.0	270		385	<50	< 50	<50	<250
MW-3	11/6/2002	147.89	86.55	0.00	61.34	2890	< 500	687	253	47.1	143		357	<10	<10	<10	< 50
MW-3	2/7/2003	147.89	86.67	0.00	61.22	2570	< 500	597	199	23.0	121		590	<10	<10	<10	< 50
MW-3	5/5/2003	147.89	86.85	0.00	61.04	2740	< 500	635	163	29.3	116		798	<10	<10	<10	< 50
MW-3	7/22/2003	147.89	86.94	0.00	60.95	2780	< 500	864	192	67.6	171		2130	<20	<20	<20	231
MW-3	10/22/2003	147.89	87.12	0.00	60.77	2630	< 500	540	183	63.5	141		610	<10	<10	<10	< 50
MW-3	1/26/2004	147.89	87.46	0.00	60.43	3640	< 500	410	221	77.0	259		333	<10	<10	<10	< 50
MW-3	*5/12/2004	147.89	87.54	0.00	60.35	4070	< 500	831	76.3	138	162		732	<4	<4	<4	238
MW-3	8/16/2004	147.89	87.72	0.00	60.17	4270	< 500	1190	34.5	193	139		830	<10	<10	<10	286
MW-3	10/22/2004	147.89	87.96	0.00	59.93	6660	< 500	1410	798	238	995		708	<10	<10	<10	214
MW-3	2/4/2005	147.89	88.10	0.00	59.79	199	< 500	28.7	26.0	1.9	28.6		70.7	<2	<2	<2	162
MW-3	4/4/2005	147.89	88.32	0.00	59.57	10600	< 500	1970	773	293	1240		1560	<20	<20	<20	658
MW-3		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

SWE	- Surveyed Well Elevation.	TPHg	- Total Petroleum Hydrocarbons as gasoline, EPA 8015M.	DIPE	- Di-isopropyl ether.
DTW	- Depth To Water.	TPHd	- Total Petroleum Hydrocarbons as diesel, EPA 8015	ETBE	- Ethyl tertiary-butyl ether.
PT	- Product Thickness (apparent).	MTBE	- Methyl tertiary butyl ether.	TBA	- T-butyl alcohol.
E-Water	er - Groundwater elevation.	<	- Less than laboratory detection limits.	LPH	- Liquid-Phase Hydrocarbons.
	- Not analyzed.	NA	- Not Available.	*	- Sampled on Alternate Date
$_{\mu}$ g/L	- Micrograms per Liter.	TAME	- Tert-amyl methyl ether.	**	- Obtained from a Higher Dilution

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## G&M OIL CO. STATION #51

COMMERCE, CA

(Concentration,  $\mu$  g/L)

Well	Date	SWE	DTW	PT	E-WATER	TPHg	TPHd	Benzene	Toluene	E- Benzene	Xylenes	MTBE	MTBE (8260)	ETBE	DIPE	TAME	T-Butyl Alcohol
MW-4	5/28/2002	148.58	86.71	0.03	61.89	LPH											
MW-4	8/27/2002	148.58	86.81	FILM	61.77	LPH											
MW-4	11/6/2002	148.58	87.17	0.00	61.41	2950	< 500	314	243	47.5	121		149	<10	<10	<10	53.5
MW-4	2/7/2003	148.58	87.31	0.00	61.27	1720	< 500	337	166	31.0	112		282	<5	<5	<5	<25
MW-4	5/5/2003	148.58	87.48	0.00	61.10	720	< 500	210	55.0	22.8	63.0		219	<10	<10	<10	<50
MW-4	7/22/2003	148.58	87.57	0.00	61.01	1370	< 500	280	143	22.4	88.1		288	<10	<10	<10	<50
MW-4	10/22/2003	148.58	87.78	0.00	60.80	700	< 500	161	24.6	13.3	43.4		174	<5	<5	<5	<25
MW-4	1/26/2004	148.58	88.13	0.00	60.45	1350	< 500	174	92.6	17.0	67.5		129	<4	<4	<4	<20
MW-4	*5/12/2004	148.58	88.18	0.00	60.40	10600	< 500	4630	897	469	561		3490	<40	<40	<40	<200
MW-4	8/16/2004	148.58	88.36	0.00	60.22	12200	< 500	4770	1490	226	749		3430	<20	<20	<20	172
MW-4	10/22/2004	148.58	88.63	0.00	59.95	2100	< 500	617	110	27.4	79.3		527	<20	<20	<20	<100
MW-4	2/4/2005	148.58	88.79	0.00	59.79	13700	< 500	3060	4370	196	1650		2400	<20	<20	<20	<100
MW-4	4/4/2005	148.58	88.97	0.00	59.61	1100	< 500	154	63.3	11.5	72.4		431**	<4	<4	<4	<20
MW-4		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
SWE	- Surveyed	Surveyed Well Elevation. TPHg - Total Petroleum Hydrocarbons as gasoline, EP									- Di-	isopropyl e	ther.				Page 4 of 9
DTW	- Depth To	Water.		TPHd	- Total Petro	leum Hyd	drocarbor	ns as diesel,	EPA 8015	ETBI	E - Eti	nyl tertiary-l	outyl ether.				
PT	- Product T	hickness (	apparent).	MTBE	- Methyl tert	iary butyl	ether.			TBA	- T-b	utyl alcohol					
E-Wate	- Groundwa	ater elevati	on.	<	- Less than I	aboratory	detectio	n limits.		LPH	- Liqu	uid-Phase I	Hydrocarbon	S.			
	- Not analy	zed.		NA	- Not Availab	ole.				*	- Sar	mpled on A	Iternate Date	Э			

- Obtained from a Higher Dilution

- Micrograms per Liter.

μg/L

TAME - Tert-amyl methyl ether.

## G&M OIL CO. STATION #51

COMMERCE, CA

Well	Date	SWE	DTW	PT	E-WATER	TPHg	TPHd	Benzene	Toluene	E- Benzene	Xylenes	MTBE	MTBE (8260)	ETBE	DIPE	TAME	T-Butyl Alcohol
MW-5	5/28/2002	147.45	85.60	0.00	61.85	7280	< 500	1100	312	56.3	1550		497	<10	<10	<10	<50
MW-5	8/27/2002	147.45	85.72	0.00	61.73	348	< 500	48.0	8.5	<5	135		104	<10	<10	<10	<50
MW-5	11/6/2002	147.45	86.12	0.00	61.33	483	< 500	47.6	15.6	5.7	22.1		123	<2	<2	<2	<10
MW-5	2/7/2003	147.45	86.25	0.00	61.20	428	< 500	51.6	17.3	<1	31.8		169	<2	<2	<2	<10
MW-5	5/5/2003	147.45	86.44	0.00	61.01	871	< 500	71.8	22.8	8.8	45.3		328	<2	<2	<2	<10
MW-5	7/22/2003	147.45	86.50	0.00	60.95	884	< 500	92.6	37.6	8.1	42.3		556	<2	<2	<2	47.2
MW-5	10/22/2003	147.45	86.73	0.00	60.72	225	< 500	26.8	12.1	8.4	23.8		159	<2	<2	<2	<10
MW-5	1/26/2004	147.45	87.10	0.00	60.35	135	< 500	17.7	15.0	9.7	35.1		17.7	<2	<2	<2	<10
MW-5	*5/12/2004	147.45	87.16	0.00	60.29	515	< 500	30.5	3.6	<1	17.6		245	<2	2.3	<2	<10
MW-5	8/16/2004	147.45	87.30	0.00	60.15	991	< 500	220	27.0	3.7	50.2		496	<2	<2	<2	18.0
MW-5	10/22/2004	147.45	87.63	0.00	59.82	97.5	< 500	1.9	<1	<1	4.8		37.8	<2	<2	<2	<10
MW-5	2/4/2005	147.45	87.68	0.00	59.77	136	< 500	28.8	35.8	<1	26.4		17.4	<2	<2	<2	<10
MW-5	4/4/2005	147.45	87.98	0.00	59.47	398	< 500	69.4	33.7	6.9	32.2		108	<2	<2	<2	<10
MW-5		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
SWE	- Surveyed	Well Elev	ation.	TPHg	- Total Petro	leum Hyd	drocarbor	ns as gasolir	ne, EPA 801	5M. DIPE	- Di-	isopropyl e	ther.			-	Page 5 of 9

SWE - Surveyed Well E	evation. TPHg	- Total Petro	leum Hydrocarbons as gasoline, EPA 8015M.	DIPE	- Di-isopropyl ether.
DTW - Depth To Water.	TPHd	- Total Petro	leum Hydrocarbons as diesel, EPA 8015	ETBE	- Ethyl tertiary-butyl ether.
PT - Product Thickness	s (apparent). MTBE	- Methyl ter	tiary butyl ether.	TBA	- T-butyl alcohol.
E-Water - Groundwater ele	ation. <	- Less than	aboratory detection limits.	LPH	- Liquid-Phase Hydrocarbons.
Not analyzed.	NA	- Not Availal	ole.	*	- Sampled on Alternate Date
$_{\mu}$ g/L - Micrograms per	iter. TAME	- Tert-amyl ı	nethyl ether.	**	- Obtained from a Higher Dilution

#### G&M OIL CO. STATION #51

## COMMERCE, CA

Well	Date	SWE	DTW	PT	E-WATER	TPHg	TPHd	Benzene	Toluene	E- Benzene	Xylenes	MTBE	MTBE (8260)	ETBE	DIPE	TAME	T-Butyl Alcohol
MW-6	5/28/2002	148.14	86.31	0.23	62.00	LPH											
MW-6	8/27/2002	148.14	86.15	0.01	62.00	LPH											
MW-6	11/6/2002	148.14	87.04	0.60	61.55	LPH											
MW-6	2/7/2003	148.14	87.19	0.57	61.38	LPH											
MW-6	5/5/2003	148.14	86.83	0.02	61.33	LPH											
MW-6	7/22/2003	148.14	87.48	0.57	61.09	LPH											
MW-6	10/22/2003	148.14	87.74	0.63	60.88	LPH											
MW-6	1/26/2004	148.14	87.91	0.51	60.62	LPH											
MW-6	*5/12/2004	148.14	88.04	0.55	60.52	LPH											
MW-6	8/16/2004	148.14	88.15	0.41	60.30	LPH											
MW-6	10/22/2004	148.14	88.17	0.00	59.97	8150	< 500	159	118	58.3	720		107	<2	<2	<2	24.3
MW-6	2/4/2005	148.14	88.28	0.00	59.86	245	< 500	8.7	23.5	2.2	35.5		50.7	<2	<2	<2	30.0
MW-6	4/4/2005	148.14	88.42	0.00	59.72	3970	< 500	39.5	162	57.2	358		77.1	<2	<2	<2	<10
MW-6		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
SWE	- Surveyed	Well Eleva	ation.	TPHg	- Total Petro	leum Hyd	drocarbor	ns as gasolin	e, EPA 801	5M. DIPE	- Di-	-isopropyl e	ther.				Page 6 of 9
DTW	- Depth To	Water.		TPHd	- Total Petro	leum Hyd	drocarbor	ıs as diesel,	EPA 8015	ETBI	E - Etl	hyl tertiary-l	outyl ether.				
PT	- Product T	hickness (	apparent).	MTBE	- Methyl tert	iary butyl	ether.			TBA	- T-b	utyl alcohol					
E-Water	- Groundwa	ater elevati	on.	<	- Less than I	aboratory	detectio	n limits.		LPH	- Liqi	uid-Phase I	Hydrocarbor	ns.			
	- Not analy	zed.		NA	- Not Availab	ole.				*	- Sai	mpled on A	Iternate Dat	е			
μg/L	- Microgran	ms per Lite	er.	TAME	- Tert-amyl n	nethyl eth	ier.			**	- Ob	tained from	a Higher D	ilution			

## G&M OIL CO. STATION #51

COMMERCE, CA

Well	Date	SWE	DTW	PT	E-WATER	TPHg	TPHd	Benzene	Toluene	E- Benzene	Xylenes	MTBE	MTBE (8260)	ETBE	DIPE	TAME	T-Butyl Alcohol
MW-7	5/12/2004	NA	87.03	0.00	NA	160	<500	28.5	2.2	1.6	13.4		73.3	<2	<2	<2	<10
MW-7	8/16/2004	147.72	87.26	0.00	60.46	54.4	< 500	<1	<1	<1	<2		23.7	<2	<2	<2	<10
MW-7	10/22/2004	147.72	87.48	0.00	60.24	< 50	< 500	<1	<1	<1	<2		3.2	<2	<2	<2	<10
MW-7	2/4/2005	147.72	87.74	0.00	59.98	< 50	< 500	<1	<1	<1	<2		6.6	<2	<2	<2	<10
MW-7	4/4/2005	147.72	87.88	0.00	59.84	376	< 500	92.4	<1	<1	<2		168	<2	<2	<2	<10
MW-7		_	_	_	_	_	_	_	_		_	_		_	_	_	_
MW-8	5/12/2004	NA	87.18	0.00	NA	2750	< 500	975	140	<10	740		853	<20	<20	<20	<100
MW-8	8/16/2004	147.76	87.43	0.00	60.33	405	< 500	85.4	<2.5	<2.5	24.0		75.2	<5	<5	<5	<25
MW-8	10/22/2004	147.76	87.79	0.00	59.97	< 50	< 500	<1	<1	<1	<2		4.0	<2	<2	<2	<10
MW-8	2/4/2005	147.76	88.91	0.00	58.85	72.0	< 500	<1	8.5	<1	13.7		4.0	<2	<2	<2	<10
MW-8	4/4/2005	147.76	88.10	0.00	59.66	58.5	< 500	30.6	<1	<1	<2		4.8	<2	<2	<2	<10
MW-8		_	_	_	_	_	_	_	_		_	_		_	_	_	_
MW-9	5/12/2004	NA	87.19	0.00	NA	278	< 500	114	5.7	<1	50.6		4.6	<2	<2	<2	<10
MW-9	8/16/2004	147.64	87.40	0.00	60.24	50.6	< 500	119	<1	<1	<2		2.0	<2	<2	<2	<10
SWE	- Surveyed	Well Eleva	ation.	TPHg	- Total Petro	leum Hyd	drocarbor	ıs as gasolir	ne, EPA 801	5M. DIPE	- Di-	isopropyl e	ether.				Page 7 of 9
DTW	- Depth To	Water.		TPHd	- Total Petro	leum Hyd	drocarbor	ıs as diesel,	EPA 8015	ETBI	E - Etl	nyl tertiary-	butyl ether.				0 ,
PT	- Product T	hickness (	apparent).	MTBE	- Methyl tert	iary butyl	ether.			TBA	- T-b	utyl alcoho	l.				
E-Water	- Groundwa	ater elevati	on.	<	- Less than I	aboratory	detectio	n limits.		LPH	- Liqi	uid-Phase I	Hydrocarbor	ns.			
	- Not analy	zed.		NA	- Not Availab	ole.				*	- Sai	mpled on A	Iternate Dat	e			
μg/L	- Microgran	ms per Lite	er.	TAME	- Tert-amyl r	nethyl eth	ier.			**	- Ob	tained fron	n a Higher D	ilution			

#### G&M OIL CO. STATION #51

## COMMERCE, CA

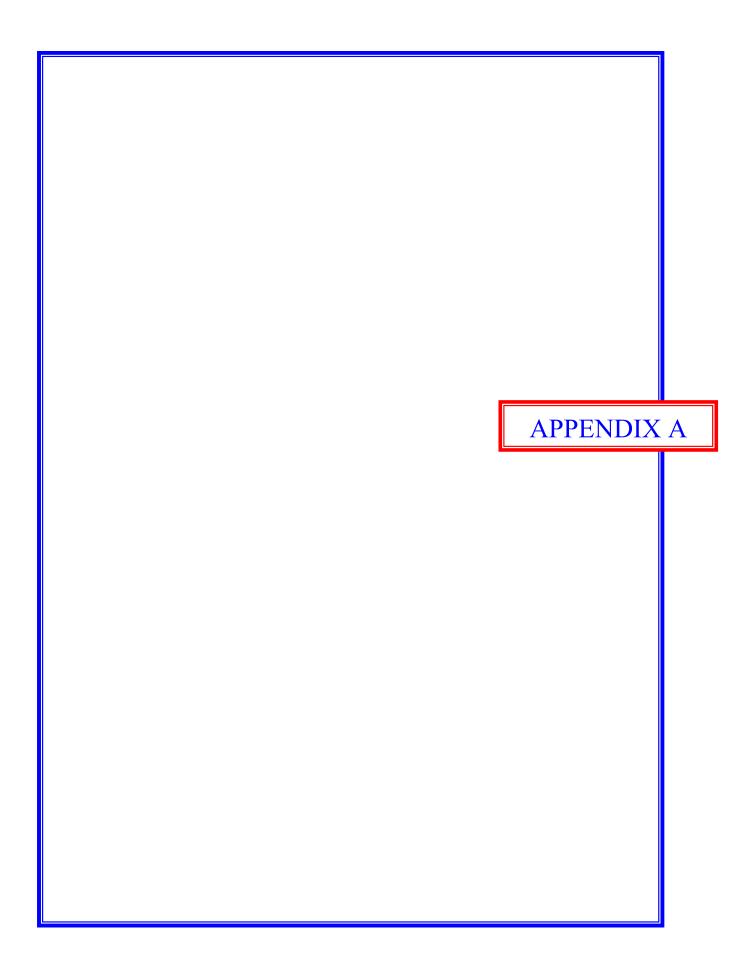
Well	Date	SWE	DTW	PT	E-WATER	TPHg	TPHd	Benzene	Toluene	E- Benzene	Xylenes	MTBE	MTBE (8260)	ETBE	DIPE	TAME	T-Butyl Alcohol
MW-9	10/22/2004	147.64	87.75	0.00	59.89	76.6	<500	1.3	1.6	<1	14.3		<2	<2	<2	<2	<10
MW-9	2/4/2005	147.64	87.88	0.00	59.76	< 50	< 500	7.7	6.3	<1	7.3		<2	<2	<2	<2	<10
MW-9	4/4/2005	147.64	88.06	0.00	59.58	110	< 500	3.1	7.4	2.4	17.3		<2	<2	<2	<2	<10
MW-9		_	_	_	_	_	_	_	_		_	_	_	_	_	_	_
MW-10	5/12/2004	NA	87.19	0.00	NA	1060	< 500	11.1	<5	<5	12.7		1010	<10	<10	<10	<50
MW-10	8/16/2004	147.50	87.40	0.00	60.10	974	< 500	57.8	1.9	1.2	12.7		711	<2	<2	<2	<10
MW-10	10/22/2004	147.50	87.65	0.00	59.85	1900	< 500	28.3	<2.5	<2.5	13.6		1250	<5	<5	<5	165
MW-10	2/4/2005	147.50	87.89	0.00	59.61	77.9	< 500	18.7	4.0	<1	2.9		23.5	<2	<2	<2	17.5
MW-10	4/4/2005	147.50	88.02	0.00	59.48	210	< 500	1.3	8.2	2.0	16.6		75.1	<2	<2	<2	99.3
MW-10		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
MW-11	5/12/2004	NA	88.27	0.03	NA	LPH											
MW-11	8/16/2004	148.68	88.47	0.03	60.23	LPH											
MW-11	10/22/2004	148.68	88.71	0.01	59.97	LPH											
MW-11	2/4/2005	148.68	78.80	0.00	69.88	2090	< 500	225	317	17.1	201		138	<4	<4	<4	41.7
SWE	- Surveyed	Well Eleva	ation.	TPHg	- Total Petro	leum Hyd	drocarbor	ıs as gasolir	ie, EPA 801	5M. DIPE	- Di-	isopropyl e	ether.				Page 8 of 9
DTW	- Depth To	Water.		TPHd	- Total Petro	leum Hyd	drocarbor	ıs as diesel,	EPA 8015	ETBI	E - Eth	nyl tertiary-	butyl ether.				
PT	- Product T	hickness (	apparent).	MTBE	- Methyl tert	iary butyl	ether.			TBA	- T-b	utyl alcoho	l.				
E-Water	- Groundwa	ater elevati	on.	<	- Less than I	aboratory	detectio	n limits.		LPH	- Liqu	uid-Phase I	Hydrocarbor	ns.			
	- Not analy	zed.		NA	- Not Availab	ole.				*	- Sar	mpled on A	Iternate Dat	e			
μg/L	- Microgran	ns per Lite	r.	TAME	- Tert-amyl r	nethyl eth	ier.			**	- Ob	tained fron	n a Higher D	ilution			

## G&M OIL CO. STATION #51

## COMMERCE, CA

Well	Date	SWE	DTW	PT	E-WATER	TPHg	TPHd	Benzene	Toluene	E- Benzene	Xylenes	MTBE	MTBE (8260)	ETBE	DIPE	TAME	T-Butyl Alcohol
MW-11	4/4/2005	148.68	87.38	0.00	61.30	324	< 500	33.4	49.8	7.1	53.0		66.4	<4	<4	<4	30.8
MW-11		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
MW-12	5/12/2004	NA	86.60	0.00	NA	188	< 500	39.5	6.7	<1	17.1		60.9	<2	<2	<2	<10
MW-12	8/16/2004	146.77	86.79	0.00	59.98	1040	< 500	379	7.0	<1	29.8		402	<2	<2	<2	<10
MW-12	10/22/2004	146.77	87.06	0.00	59.71	849	< 500	49.6	20.2	6.9	30.8		138	<4	<4	<4	<20
MW-12	2/4/2005	146.77	87.16	0.00	59.61	428	< 500	143	8.3	<1	13.6		125	<2	<2	<2	<10
MW-12	4/4/2005	146.77	87.38	0.00	59.39	1160	< 500	12.4	131	26.6	208		23.0	<2	<2	<2	<10
MW-12		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

SWE - Surveyed Well E	evation. TPHg		- Total Petroleum Hydrocarbons as gasoline, EPA 8015M.	DIPE	- Di-isopropyl ether.	Page 9 of 9
DTW - Depth To Water.	TPHd		- Total Petroleum Hydrocarbons as diesel, EPA 8015	ETBE	- Ethyl tertiary-butyl ether.	
PT - Product Thickne	ss (apparent). MTBE	-	Methyl tertiary butyl ether.	TBA	- T-butyl alcohol.	
E-Water - Groundwater ele	vation. <	-	Less than laboratory detection limits.	LPH	- Liquid-Phase Hydrocarbons.	
Not analyzed.	NA	-	Not Available.	*	- Sampled on Alternate Date	
μ g/L - Micrograms per	_iter. TAME	-	Tert-amyl methyl ether.	**	- Obtained from a Higher Dilution	



#### G&M OIL COMPANY STATION #51 QUARTERLY STATUS REPORT 2ND QUARTER 2005

SITE LOCATION: 2155 S. Atlantic Blvd., Commerce, CA 90040

OWNER/OPERATOR: G&M Oil Co., 16868 "A" Street, Huntington Beach, CA 92647

CONTACT: Ms. Jennifer Talbert

LEAD AGENCY: Los Angeles Regional Water Quality Control Board

AGENCY CONTACT: Mr. Arman Toumari

#### Site Activities this Quarter

Quarterly groundwater monitoring and sampling was performed on April 4, 2005
 Approx. 646 gal. of groundwater purged prior to sampling wells. Purge water removed utilizing a vacuum truck.

• Additional analytical data presented in **Table 2**.

#### **Future Site Activities**

 ATLAS anticipates to continue quarterly groundwater monitoring, sampling and reporting for 3rd Quarter 2005.

#### **Quarterly Summary**

Total GW Monitoring Wells:	12
GW Wells Gauged:	12
GW Wells Sampled:	12
Wells with Liquid Phase Hydrocarbons(LPH):	0
Gallons of LPH Removed this Quarter:	0
Gallons of LPH Removed to Date:	4.75
Depth to Groundwater (feet):	87.38 to 88.97
Groundwater Elevation (feet):	59.39 to 61.30
Approximate Groundwater Gradient(ft/ft)	0.02
Approximate Groundwater Flow Direction:	Southwesterly
Consistent with Last Quarter:	Yes

#### **Analytical Summary**

- ······				
TPHd Concentrations	( μ g/L):	<500		
TPHg Concentrations	( μg/L):	58.5	to	10,600
Benzene Concentrations	( μg/L):	1.3	to	1,970
Toluene Concentrations	( μg/L):	<1	to	773
Ethylbenzene Concentrations	( μg/L):	<1	to	293
Total Xylenes Concentrations	( μg/L):	<2	to	1,240
MTBE (EPA 8260) Concentrations	( μg/L):	<2	to	1,560
ETBE Concentrations	( μg/L):	<2	to	<20
DIPE Concentrations	( μg/L):	<2	to	<20
TAME Concentrations	( μg/L):	<2	to	<20
TBA Concentrations	( μg/L):	<10	to	658

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# ATLAS ENVIRONMENTAL ENGINEERING, INC.

15701 CHEMICAL LANE HUNTINGTON BEACH, CA 92649 (714) 890 - 7129 PROJECT STATUS REPORT

G&M OIL COMPANY S.S. #51

2155 S. ATLANTIC BOULEVARD

COMMERCE, CA 90040

AE JOB NO./INV.: G51-Q205

DATE: APRIL 4, 2005

#### OBSERVATION WELLS

NO. DTW DTP		PT	GALLONS	DTB	DIA.	ELEVATION		ODORS			F/P		
QUARTERLY		FEET	REMOVED	FEET	INCH.	CDTW	SWE	E-WAT	YES	NO	SLIGHT	YES	NO
MW-1	88.40		56.00	109.77	4.00	88.40	148.21	59.81	-	Х	-	-	Х
MW-2	88.29		56.00	107.98	4.00	88.29	148.07	59.78	-	Х	_	-	Х
MW-3	88.32		50.00	107.11	4.00	88.32	147.89	59.57	-	Х	-	-	Х
MW-4	88.97		48.00	107.12	4.00	88.97	148.58	59.61	_	Х	-	-	Х
MW-5	87.98		51.00	107.28	4.00	87.98	147.45	59.47	_	Х	-	-	Х
MW-6	88.42		106.00	128.95	4.00	88.42	148.14	59.72	-	Х	-	-	Х
MW-7	87.88		49.00	106.36	4.00	87.88	147.72	59.84	_	Х	-	_	Х
MW-8	88.10		31.00	99.82	4.00	88.10	147.76	59.66	_	Х	_	-	Х
MW-9	88.06		47.00	105.86	4.00	88.06	147.64	59.58	_	Х	_	-	Х
MW-10	88.02		53.00	108.33	4.00	88.02	147.50	59.48	_	Х	_	_	Х
MW-11	87.38		48.00	107.22	4.00	87.38	148.68	61.30	-	Х	_	-	Х
MW-12	87.38		51.00	108.68	4.00	87.38	146.77	59.39	-	Х	-	-	Х

EXPLANATION

MEASUREMENTS IN FEET

DTW - DEPTH TO WATER FROM SURFACE

DTP - DEPTH TO PRODUCT FROM SURFACE

DTB - DEPTH TO BOTTOM

PT - PRODUCT THICKNESS DIA - WELL DIAMETER F/P - FREE PRODUCT

SWE - SURVEYED WELL HEAD ELEVATION

E-WAT - ELEVATION OF WATER

F/F - F

CDTW-CORRECTED DEPTH TO WATER FOR PRESENCE OF FREE PRODUCT (USING SPECIFIC GRAVITY OF 0.755)

#### REMARKS

QU	QUARTERLY SAMPLING THE REMOVED PRODUCT AND/OR PRODUCT/GROUNDWATER MIXTURE WAS REMOVED USING A VACUUM TRUCK WITH A STORAGE TANK, FOR PROPER DISPOSAL BY GENERATOR.							
FREE PROI	DUCT REMOVED:	APPROX.	0.00	GALLONS	TOTAL	TO DATE:	4.75	GALLONS
GROUNDWA	ATER(*) REMOVED:	APPROX.	646.00	GALLONS	TOTAL	TO DATE:	5141.25	GALLONS
(*) PRODUCT/GROUNDWATER MIXTURE/DECON. WATER								
5	5 GALLON DRUM:	PROD.		GALLONS		DIA	DTW	
		WATER		GALLONS		עו	DTP	
DATA RECC	RDED BY: FELIX	VELASQUEZ	/ ROGEF	R GONZALEZ		INPL	JT BY:	KB

SITE/JOB	G&M OIL STATION #51	DATE	4/4/2005
ADDRESS	2155 S. ATLANTIC BLVE	D., COMMERCE, CA 9	00040
PERSONNEL	FELIX/ROGER	WEATHER	SUNNY
WELL NO	MW-1	EQUIPMENT	VACUUM TRUCK

	Ε	Before F	Purging		
Total Well Depth	109.77	Ft.	Well Diameter	4.00	_ Inch.
Depth to Water	88.40	Ft.	Est. Purge Vol.	55.82	_ Gal.

Sampling Data								
Initial Turbidity _	90.80		Fi	nal Turbidity	3.70			
D.O	3.00	ppm	0	RP	-10.00	mV		
Time (MT)	800	805	810	815	820	825		
EC	1137	1204	1205	1213	1213	1220		
рН	7.56	7.49	7.46	7.43	7.42	7.42		
Temp. (°F)	71.2	70.3	71.1	70.9	71.2	71.4		
(°C)	21.8	21.3	21.7	21.6	21.8	21.9		
Gal.	9.00	18.00	27.00	36.00	45.00	56.00		
Time (MT)								
EC								
pH								
Temp. (°F)								
(°C)								
Gal.								

	After Purging/	Before	Sample Collection	1	
Depth to Water	90.19	Ft.	Total Well Depth	109.77	Ft.

SITE/JOB	G&M OIL STATION #51	DATE	4/4/2005
ADDRESS	2155 S. ATLANTIC BLVE	D., COMMERCE, CA 9	0040
PERSONNEL	FELIX/ROGER	WEATHER	SUNNY
WELL NO	MW-2	EQUIPMENT	VACUUM TRUCK

	E	Before P	Purging		
Total Well Depth	107.98	Ft.	Well Diameter	4.00	_ Inch.
Depth to Water	88.29	Ft.	Est. Purge Vol.	51.43	_ Gal.

	Sampling Data								
Initial Turbidity _ D.O	94.60 2.60	ppm		Final Turbidity	3.70 27.00	mV			
Time (MT) _ EC _ pH _ Temp. (°F) _ (°C) _ Gal.	1028 1089 7.74 73.4 23.0 9.00	1034 1028 7.84 15.4 21.5 18.00	1040 1064 7.84 71.8 22.1 27.00	1046 1081 7.85 70.5 21.4 36.00	1052 1074 7.89 71.6 22.0 45.00	1100 1080 7.89 72.0 22.2 56.00			
Time (MT) _ EC _ pH _ Temp. (°F) _ (°C) _									

	After Purging/	Before	Sample Collection	1	
Depth to Water	90.19	Ft.	Total Well Depth	107.98	Ft.

SITE/JOB	G&M OIL STATION #51	DATE	4/4/2005					
ADDRESS	2155 S. ATLANTIC BLVD., COMMERCE, CA 90040							
PERSONNEL	FELIX/ROGER	WEATHER	SUNNY					
WELL NO	<i>MW-3</i>	EQUIPMENT	VACUUM TRUCK					

	E	Before P	urging		
Total Well Depth	107.11	Ft.	Well Diameter	4.00	_ Inch.
Depth to Water	88.32	Ft.	Est. Purge Vol.	49.08	_ Gal.

Sampling Data								
Initial Turbidity _ D.O.	84.20 2.00	ppm		inal Turbidity	3.60 209.00	mV		
Time (MT) _ EC _	1205 1421	1210 1429	1215 1427	<u>1220</u> 1486	1225 1493	<u>1230</u> 1491		
pH _ Temp. (°F) _ (°C)	7.62 81.3 27.4	7.43 15.4 26.4	7.36 78.8 26.0	7.31 75.9 24.4	7.29 75.38 24.1	7.28 74.8 23.8		
Gal	8.00	16.00	24.00	32.00	40.00	50.00		
EC _ pH _								
Temp. (°F) _ (°C) _ Gal								

	After Purging/	Before	Sample Collection	1	
Depth to Water	90.19	Ft.	Total Well Depth	107.11	Ft.

SITE/JOB	G&M OIL STATION #51	DATE	4/4/2005
ADDRESS	2155 S. ATLANTIC BLVD	)., COMMERCE, CA 9	0040
PERSONNEL	FELIX/ROGER	WEATHER	SUNNY
WELL NO	MW-4	EQUIPMENT	VACUUM TRUCK

	Ε	Before F	urging		
Total Well Depth	107.12	Ft.	Well Diameter	4.00	_ Inch.
Depth to Water	88.97	Ft.	Est. Purge Vol.	47.41	_ Gal.

	Sampling Data								
Initial Turbidity _ D.O.	90.10 22.20	ppm		Final Turbidity ORP	3.66 -152.00	mV			
Time (MT) _ EC _ pH _ Temp. (°F) _ (°C) _ Gal.	1106 1277 7.73 77.4 25.2 8.00	1111 1287 7.58 15.4 24.9 16.00	1116 1320 7.49 75.6 24.2 24.00	1121 1333 7.44 74.5 23.6 32.00	1226 1330 7.40 74.5 23.6 40.00	1131 1313 7.40 23.7 48.00			
Time (MT) _ EC _ pH _ Temp. (°F) _ (°C) _									

	After Purging/	Before	Sample Collection	1	
Depth to Water	90.04	Ft.	Total Well Depth	107.12	Ft.

SITE/JOB	G&M OIL STATION #51	DATE	4/4/2005
ADDRESS	2155 S. ATLANTIC BLVD	D., COMMERCE, CA 9	00040
PERSONNEL	FELIX/ROGER	WEATHER	SUNNY
WELL NO	MW-5	EQUIPMENT	VACUUM TRUCK

	E	Before P	urging		
Total Well Depth	107.28	Ft.	Well Diameter	4.00	_ Inch.
Depth to Water	87.98	Ft.	Est. Purge Vol.	50.41	_ Gal.

Sampling Data								
Initial Turbidity _ D.O.	84.30 3.60	ppm		Final Turbidity	3.90 38.00	mV		
Time (MT)	1310	1315	1320	1325	1330	1335		
EC	1079 7.67	1069 7.55	1079 7.54	1121 7.49	1096 7.46	1126 7.46		
Temp. (°F)	75.2	15.4	75.9	74.1	74.8	72.7		
(°C) _ Gal	24.0 8.00	<u>24.8</u> <u>16.00</u>	24.4	<u>23.4</u> <u>32.00</u>	23.8 40.00	22.6 51.00		
Time (MT) _ EC _ pH								
Temp. (°F) _ (°C)								
Gal.								

	After Purging/	Before	Sample Collection		
Depth to Water	90.00	Ft.	Total Well Depth	107.28	Ft.

SITE/JOB	G&M OIL STATION #51	DATE	4/4/2005
ADDRESS _	2155 S. ATLANTIC BLVD	., COMMERCE, CA 9	0040
PERSONNEL	FELIX/ROGER	WEATHER	SUNNY
WELL NO	MW-6	EQUIPMENT	VACUUM TRUCK

	E	Sefore F	urging		
Total Well Depth	128.95	Ft.	Well Diameter	4.00	_ Inch.
Depth to Water	88.42	Ft.	Est. Purge Vol.	105.86	_ Gal.

	Sampling Data								
Initial Turbidity _				inal Turbidity					
D.O	3.60	ppm	C	)RP	-117.00	mV			
Time (MT)	915	925	935	945	955	1020			
EC	1273	1269	1255	1247	1252	1172			
рН _	7.66	7.53	7.48	7.63	7.28	7.28			
Temp. (°F) _	80.2	15.4	79.5	83.7	81.7	72.7			
(°C)	26.8	25.6	26.4	28.7	27.6	22.6			
Gal	15.00	30.00	45.00	60.00	75.00	106.00			
Time (MT)									
EC `´´									
pН									
Temp. (°F)									
(°C)									
Gal.									
_									

	After Purging/	Before	Sample Collection	1	
Depth to Water	90.04	Ft.	Total Well Depth	128.95	Ft.

SITE/JOB	G&M OIL STATION #51	DATE	4/4/2005
ADDRESS	2155 S. ATLANTIC BLVE	D., COMMERCE, CA 9	00040
PERSONNEL	FELIX/ROGER	WEATHER	CLOUDY/RAINY
WELL NO	MW-7	EQUIPMENT	VACUUM TRUCK

	E	Before F	Purging		
Total Well Depth	106.36	Ft.	Well Diameter	4.00	_ Inch.
Depth to Water	87.88	Ft.	Est. Purge Vol.	48.27	_ Gal.

	Sampling Data								
Initial Turbidity _ D.O	96.40 3.00	ppm		Final Turbidity ORP	3.90 44.00	mV			
Time (MT) _ EC _ pH _ Temp. (°F) _ (°C) _ Gal.	830 1299 7.53 65.3 18.5 7.00	837 1143 7.48 64.0 17.8 14.00	844 1130 7.70 63.5 17.5 21.00	851 1073 7.39 70.2 21.2 28.00	858 1051 7.82 73.0 22.8 35.00	908 1066 7.82 73.2 22.9 49.00			
Time (MT) _ EC _ pH _ Temp. (°F) _ (°C) _ Gal.									

	After Purging/	Before	Sample Collection	1	
Depth to Water	90.01	Ft.	Total Well Depth	106.36	Ft.

SITE/JOB	G&M OIL STATION #51	DATE	4/4/2005
ADDRESS	2155 S. ATLANTIC BLVD	D., COMMERCE, CA 9	0040
PERSONNEL	FELIX/ROGER	WEATHER	SUNNY
WELL NO	MW-8	EQUIPMENT	VACUUM TRUCK

	В	efore P	urging		
Total Well Depth	99.82	Ft.	Well Diameter	4.00	_ Inch.
Depth to Water	88.10	Ft.	Est. Purge Vol.	30.61	_ Gal.

Sampling Data								
Initial Turbidity_	96.40			nal Turbidity	3.70			
D.O	2.80	ppm	O	RP	34.00	mV		
Time (MT)	1136	1140	1143	1146	1150	1155		
EC _	1126	1127	1124	1130	1131	1136		
pH _	7.87	7.87	7.89	7.94	7.92	7.92		
Temp. (°F) _	22.5	15.4	71.2	72.7	72.0	72.3		
(°C)	22.5	22.0	21.8	22.6	22.2	22.4		
Gal	5.00	10.00	15.00	20.00	25.00	30.00		
Time (MT)								
EC								
рН								
Temp. (°F)								
(°C)								
Gal.								

	After Purging/	Before	Sample Collection		
Depth to Water	90.28	Ft.	Total Well Depth	99.82	Ft.

SITE/JOB	G&M OIL STATION #51	DATE	4/4/2005
ADDRESS	2155 S. ATLANTIC BLVD.	., COMMERCE, CA 9	0040
PERSONNEL	FELIX/ROGER	WEATHER	SUNNY
WELL NO	MW-9	EQUIPMENT	VACUUM TRUCK

	E	Sefore F	Purging		
Total Well Depth	105.86	Ft.	Well Diameter	4.00	_ Inch.
Depth to Water	88.06	Ft.	Est. Purge Vol.	46.49	_ Gal.

	Sampling Data								
Initial Turbidity _ D.O	98.60 4.00	ppm		Final Turbidity ORP	3.79 23.00	mV			
Time (MT) EC pH Temp. (°F) (°C) Gal.	1240 1093 8.05 80.2 26.8 8.00	1245 1045 7.90 15.4 24.7 16.00	1250 1086 7.84 74.3 23.5 24.00	1255 1079 7.84 75.6 24.2 32.00	1300 1013 7.80 73.8 23.2 40.00	1305 1026 7.80 73.0 22.8 47.00			
Time (MT) _ EC _ pH _ Temp. (°F) _ (°C) _ Gal.									

	After Purging/	Before	Sample Collection	1	
Depth to Water	91.02	Ft.	Total Well Depth	105.86	Ft.

SITE/JOB	G&M OIL STATION #51	DATE	4/4/2005
ADDRESS	2155 S. ATLANTIC BLVD	., COMMERCE, CA 9	0040
PERSONNEL	FELIX/ROGER	WEATHER	SUNNY
WELL NO	MW-10	EQUIPMENT	VACUUM TRUCK

	Ε	Before F	urging		
Total Well Depth	108.33	Ft.	Well Diameter	4.00	Inch.
Depth to Water	88.02	Ft.	Est. Purge Vol.	53.05	Gal.

	Sampling Data								
Initial Turbidity _ D.O	90.20 2.40	ppm		Final Turbidity ORP	3.19 -70.00	mV			
Time (MT) EC pH Temp. (°F) (°C) Gal.	1340 1192 8.22 81.5 27.5 9.00	1345 1224 7.91 15.4 24.1 18.00	1350 1237 7.81 74.7 23.7 27.00	1355 1257 7.78 72.7 22.6 36.00	1400 1223 7.77 74.7 23.7 45.00	1405 1179 7.77 76.5 24.7 53.00			
Time (MT) _ EC _ pH _ Temp. (°F) _ (°C) _									

	After Purging/	Before	Sample Collection	1	
Depth to Water	90.19	Ft.	Total Well Depth	108.33	Ft.

SITE/JOB	G&M OIL STATION #51	DATE	4/4/2005					
ADDRESS	2155 S. ATLANTIC BLVD., COMMERCE, CA 90040							
PERSONNEL	FELIX/ROGER	WEATHER	SUNNY					
WELL NO	MW-11	EQUIPMENT	VACUUM TRUCK					

	E	Before P	urging		
Total Well Depth	107.22	Ft.	Well Diameter	4.00	_ Inch.
Depth to Water	89.06	Ft.	Est. Purge Vol.	47.43	_ Gal.

Sampling Data								
Initial Turbidity_	88.60			inal Turbidity	3.19			
D.O	3.40	ppm	C	RP	52.00	mV		
Time (MT) _	1245	1450	1455	1500	1505	1512		
EC _	1278	1231	1312	1246	1320	1341		
pH _	7.90	7.75	7.66	7.62	7.60	7.60		
Temp. (°F)	84.6	15.4	70.9	75.0	68.5	66.9		
(°C)	29.2	26.7	21.6	23.9	20.3	19.4		
Gal.	8.00	16.00	24.00	32.00	40.00	48.00		
Time (MT)								
EC								
pН								
Temp. (°F)								
(°C)								
Gal.								

	After Purging/	Before	Sample Collection	1	
Depth to Water	91.61	Ft.	Total Well Depth	107.22	Ft.

SITE/JOB	G&M OIL STATION #51	DATE	4/4/2005
ADDRESS	2155 S. ATLANTIC BLVD	., COMMERCE, CA 9	0040
PERSONNEL	FELIX/ROGER	WEATHER	SUNNY
WELL NO	MW-12	EQUIPMENT	VACUUM TRUCK

	E	efore F	Purging		
Total Well Depth	106.68	Ft.	Well Diameter	4.00	_ Inch.
Depth to Water	87.38	Ft.	Est. Purge Vol.	50.41	_ Gal.

	Sampling Data								
Initial Turbidity _ D.O.	92.60 3.40	ppm		Final Turbidity	3.28 26.00	mV			
Time (MT) _ EC _ pH _ Temp. (°F) _ (°C) _	1410 1178 8.05 86.4 30.2 8.00	1415 1155 7.78 15.4 26.8 16.00	1420 1169 7.65 76.5 24.7 24.00	1425 1092 7.59 77.5 25.3 32.00	1430 1144 7.58 73.4 23.0 40.00	1436 1155 7.58 71.2 21.8 51.00			
Time (MT) _ EC _ pH _ Temp. (°F) _ (°C) _ Gal.									

	After Purging/	Before	Sample Collection	1	
Depth to Water	90.19	Ft.	Total Well Depth	106.68	Ft.

#### **GROUNDWATER SAMPLING PROCEDURES**

### Sample Collection - Purging Method

- 1. Integrity of the well cover, well cap and top of casing are established and noted for future reference.
- 2. Non-dedicated equipment is decontaminated using a steam cleaner or "three bucket" wash.
- 3. Depth to water, depth to product (if present) and total depth of well are determined using an Oil Recovery Systems' Interface probe or equivalent (0.01 accuracy).
- 4. Groundwater is removed from the well by bailing or pumping until dry or until at least 4 well volumes have been purged and water quality parameters (pH, conductivity and temperature) stabilized. The water is discharged into D.O.T. 55-gallon drums or a vacuum truck with a storage tank.
- 5. After the well has recovered at least 80 percent, a sample is taken just below the water surface using a bailer (teflon, stainless steel or disposable bottom emptying) and placed into a laboratory supplied vial. The vial is completely filled, cap immediately placed over the top and securely tightened. The vial is inverted and tapped to determine if air bubbles are present. If none, the sample is labeled, and placed on ice until delivery to the laboratory.

### Sample Collection - No Purge Method

- 1. Integrity of the well cover, well cap and top of casing are established and noted for future reference.
- 2. Non-dedicated equipment is decontaminated using a steam cleaner or "three bucket" wash.
- 3. Depth to water, depth to product (if present) and total depth of well are determined using an Interface probe (0.01 accuracy).
- 4. A sample is taken just below the water surface using a bailer (Teflon, stainless steel or disposable, all bottom emptying) and placed into a laboratory supplied vial. The vial is completely filled, cap immediately placed over the top and securely tightened. The vial is inverted and tapped to determine if air bubbles are present. If none, the sample is labeled, and placed on ice until delivery to the laboratory.

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### **Quality Control/Quality Assurance**

- The field data sheet is completed with all pertinent data such as; integrity of well, quantity of water purged, pH, temperature, and specific conductance, if available.
- 2. The samples are transported to the laboratory as soon as possible following chain-of-custody procedures. In the event a holding time of greater than 7 days is required, the laboratory will be requested to supply vials with the appropriate preservatives for the analyses requested.
- 3. Wells are sampled from the order of least to highest concentrations, if known.
- 4. Site conditions are noted which may potentially contaminate the sample i.e. smoke, vapors from running engines, etc.
- 5. If a single bailer is used for collection of all samples, an "equipment blank" sample will be collect following the same protocol of sample collection. The same water supply used to rinse the equipment will be used to collect the blank sample.
- 6. A trip blank, if required, supplied by the analytical laboratory will be stored and transported with the samples until their delivery back to the laboratory.
- 7. The blank samples will be analyzed for all constituents.

### Sample Shipment and Chain-of-Custody

Complete records are kept on each sample including sampling date, sample type, location, and other pertinent information. The sample containers are banded and sealed with chain-of-custody seals. The samples are chilled in an ice chest using block or blue ice. Care is taken not cause sample freezing which may result in container breakage during transport to the laboratory.

Chain-of-Custody procedures, generally described in <u>Test Methods for Evaluating Solid Waste</u>, SW-846, U.S. EPA, 1982, are followed. A chain-of-custody form accompanies the sample from the place of collection to the laboratory, and through the completion of the analytical process. The chain-of-custody form includes project identification information, the sample type and number, the date and time of sampling, the chemical analyses requested, and the identity of the person taking possession at each change of custody.

## **Equipment Cleaning**

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When steam-cleaning is not available, the "three bucket" wash is used. The three bucket wash consists of an Alconox solution cleaning, a tap water rinse and a distilled water rinse. No solvent (hexane) rinses will be used. For bailers, the Alconox solution is flushed completely through the inside followed by flushing with two tap water rinsing. When submersible, bladder or double-diaphragm pumps are used (non-dedicated), the solution of Alconox is cycled through the pump body and hoses followed by similar water rinses.

#### Waste Storage and Disposal

The effluent and/or decontamination water generated during the testing and equipment cleaning is placed in 55-gallon D.O.T. drums or a vacuum truck is utilized. The drums are sealed, labeled and left on site pending disposal/ treatment by owner. Purged water placed in a vacuum truck is transported offsite to an appropriate disposal facility.

ATLAS\WTR-SPL.PRC Page 3 of 3



# Able Environmental Services

## **DAILY TICKET**

### **Waste Transportation**

P.O. Box 4172

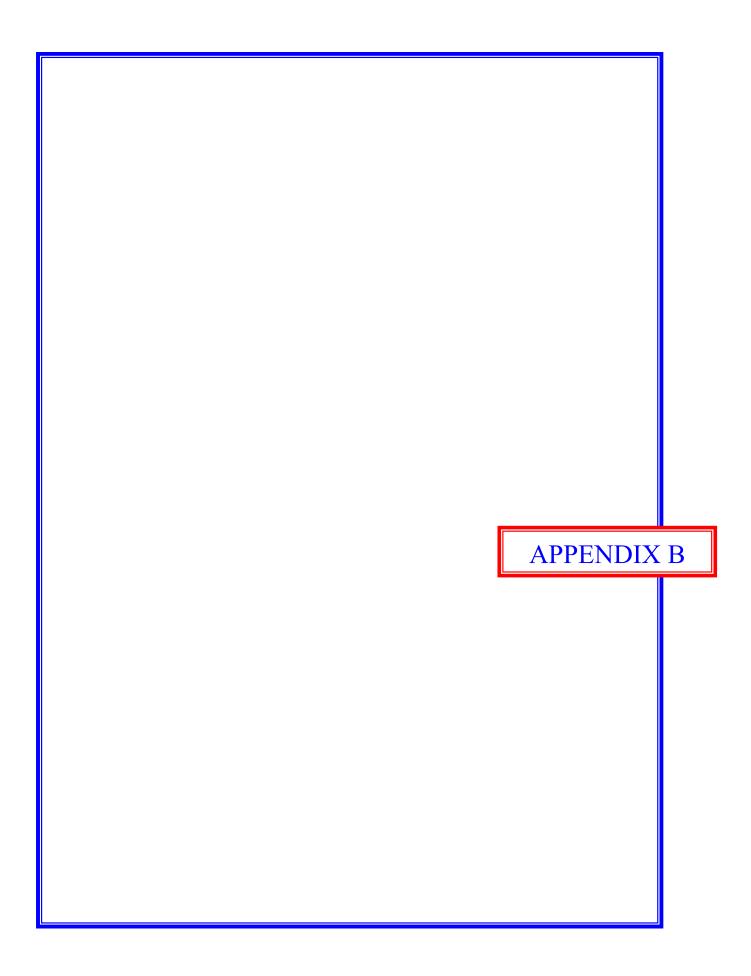
Huntington Beach, California 92605-4172

24 Hr: (714) 413-4105 Fax: (714) 846-8128 -- 0448

DT 8113

JOB DATE 4/4/05

CHEK			Fax: (714)	846-812	28				
COMPANY SOLD TO	FIIVI	Ronm	ental	ORI	DER DATE	ORDER TIME	P.O. NUM	BER	
ORDERED BY			TELEPHONE	JOB	SITE:	as #	51		
ADDRESS				0 21		ATH		i 15	Ird
			16	CONT	ACT:	POPCE	CA		TELEPHONE:
DRIVER		SWAMPE	≣R		TRUCK N	O. TRAILER N	O. START	ГТІМЕ	HOURLY RATE
Jose					F= 12	1 KPI		\$	
DESCRIPTION OF WOR	RK REQUIRE	ED				•			
pump	OUT	+ pro	mitor;	ng 6	We,	1/5			
/ //			gariel	Saun	ohin				
EQUIPMENT NE	EEDED:		January Com						
	YARD	JOB	JOB	DUMP SITE	DUMP		RD	LUNCH	TOTAL HOURS
4/4/05 6	30AM	8:001	DEPART 43:15pM	ARRIVE	DEPA	ART ARI	RIVE	A	
WORK PERFORMED	VON,	442							
MANIFEST #	5800	3	GALLONS:	646		SOLID	s %:		
STINGERS U	JSED:								
TRUCK WASHED OUT	LUNC	CH TAKEN	TOTAL HOURS	CHARGED		HOURLY RATE	\$		CHARGES
DRIVER SIGNATURE	0		TRUCK NUMBE	ER CUSTO	MER/SIGN	ATURE			DATE
Jan fr	Annual Commence	and the second s	FD	X	MA	gen	>	. 4	14/05
*** 24-HO	UR S	<b>ERVIC</b>	E***		/				





**Environmental Laboratories** 

#### CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD LOS ANGELES REGION

#### **LABORATORY REPORT FORM (COVER PAGE 1)**

Laboratory Name	· Southbland	Technical So	ervices	Environment	al Lahs
Laboratory marrie	. Souumnanu	1 cenincai S	CI VICES		ai Laus

Address: 7801 Telegraph Road, Suite L. Montebello, CA 90640

Telephone/Fax: (323) 888-0728 / (323) 888-1509

ELAP Certification No.: <u>1986</u> Expiration Date: <u>04-30-2006</u>

Authorized Signature

Name, Title (Print): Roger Wang, Laboratory Director

Signature, Date: , 04-11-2005

Client: <u>Atlas Environmental Engineering</u>

Project: <u>G & M Oil Co. #51</u>

Project Site: 2155 S. Atlantic Blvd., Commerce, CA.

Lab Job No.: <u>R504014</u>

Date(s) Sampled: <u>04-04-2005</u> To <u>04-04-2005</u>

Date(s) Received: <u>04-04-2005</u> To <u>04-04-2005</u>

Date(s) Reported: 04-11-2005

Chain of custody received: Yes X No



**Environmental Laboratories** 

# CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD LOS ANGELES REGION

#### **LABORATORY REPORT FORM (COVER PAGE 2)**

Organic Analyses	# of Samples:	# of Samples Subcontracted:
EPA 8015M (Gasoline)	12	0
EPA 8015M (Diesel)	12	0
EPA 8260B (BTEX & Oxygenates)	12	0
Methane by GC/FID	12	0
Sample Condition: Chille	d, intact, good condition	
Inorganic Analyses	# of Samples:	# of Samples Subcontracted:
Nitrate (EPA 352.1)	12	0
Sulfate (EPA 375.4)	12	0
Ferrous Iron (Colormetry)	12	0
Sample Condition: Chille	d, intact, good condition	
Microbiological Analyses	# of Samples:	# of Samples Subcontracted:
	0	0
Sample Condition:		
Other Types of Analyses	# of Samples:	# of Samples Subcontracted:
	0	0
Sample Condition:		



**Environmental Laboratories** 

#### ANALYTICAL TEST RESULT

Reporting Unit: µg/L (ppb)

Date of Analysis fo	or TPH (Ga	asoline)	04-07-05	04-07-05	04-07-05	04-07-05	04-07-05	04-07-05
Date of Extraction fo	Date of Extraction for TPH (Gasoline)		NA	NA	NA	NA	NA	NA
<b>Extraction Method for TPH (Gasoline)</b>			5030	5030	5030	5030	5030	5030
Dilution Factor fo	Dilution Factor for TPH (Gasoline)			1	1	10	2	1
Date of Analysis	s for TPH (	(Diesel)	04-06-05	04-06-05	04-06-05	04-06-05	04-06-05	04-06-05
Date of Extraction	n for TPH (	(Diesel)	04-05-05	04-05-05	04-05-05	04-05-05	04-05-05	04-05-05
Extraction Solvent	t for TPH (	(Diesel)	Hexane	Hexane	Hexane	Hexane	Hexane	Hexane
Dilution Factor	r for TPH (	(Diesel)	1	1	1	1	1	1
т.	AB SAMPI	IEID		R504014-	R504014-	R504014-	R504014-	R504014-
L	AD SAMIT	LE I.D.		1	2	3	4	5
CLIE	NT SAMPI	LE I.D.		MW-1	MW-2	MW-3	MW-4	MW-5
COMPOUND		MDL	MB					
TPH-Gasoline (C4 - C12)		50	ND	273	283	10,600	1,100	398
TPH-Diesel (C13 - C23)		500	ND	ND	ND	ND	ND	ND
Surrogate	Spk Conc.	ACP%	MB %RC	%RC	%RC	%RC	%RC	%RC
BFB (for TPH-Gasoline)	20 ppb	70-130	118	121	121	115	116	115
Diocthyl Phthalate (for TPH-Diesel)	5 ppm	70-130	98	124	100	98	96	94

<sup>\* :</sup> Obtained from a higher dilution analysis.

SPK Conc.=Spiking Concentration; ACP%=Acceptable Range of Percent; %RC=% Recovery MDL=Method Detection Limit; MB=Method Blank; ND=Not Detected(Below MDL); NA=Not Analyzed



**Environmental Laboratories** 

#### ANALYTICAL TEST RESULT

Reporting Unit: µg/L (ppb)

Date of Analysis fo	or TPH (Ga	asoline)	04-07-05	04-07-05	04-07-05	04-07-05	04-07-05	04-07-05
Date of Extraction fo	Date of Extraction for TPH (Gasoline)		NA	NA	NA	NA	NA	NA
Extraction Method for	<b>Extraction Method for TPH (Gasoline)</b>		5030	5030	5030	5030	5030	5030
Dilution Factor fo	or TPH (Ga	asoline)	1	1	1	1	1	2
Date of Analysis	s for TPH (	(Diesel)	04-06-05	04-06-05	04-06-05	04-06-05	04-06-05	04-06-05
Date of Extraction	n for TPH (	(Diesel)	04-05-05	04-05-05	04-05-05	04-05-05	04-05-05	04-05-05
Extraction Solven	t for TPH (	(Diesel)	Hexane	Hexane	Hexane	Hexane	Hexane	Hexane
Dilution Factor	r for TPH (	(Diesel)	1	1	1	1	1	1
т	AB SAMP	IEID	R504014-	R504014-	R504014-	R504014-	R504014-	R504014-
L	AD SAMIF	LE I.D.	6	7	8	9	10	11
CLIE	NT SAMP	LE I.D.	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11
COMPOUND		MDL						
TPH-Gasoline (C4 - C12)		50	3,970	376	58.5	110	210	324
TPH-Diesel (C13 - C23)		500	ND	ND	ND	ND	ND	ND
Surrogate	Spk Conc.	ACP%	%RC	%RC	%RC	%RC	%RC	%RC
BFB (for TPH-Gasoline)	20 ppb	70-130	125	116	117	120	112	119
Diocthyl Phthalate (for TPH-Diesel)	5 ppm	70-130	96	96	96	96	96	106

SPK Conc.=Spiking Concentration; ACP%=Acceptable Range of Percent; %RC=% Recovery MDL=Method Detection Limit; MB=Method Blank; ND=Not Detected(Below MDL); NA=Not Analyzed



**Environmental Laboratories** 

#### ANALYTICAL TEST RESULT

Reporting Unit: µg/L (ppb)

Date of Analysis fo	or TPH (Ga	asoline)	04-07-05	04-07-05		
Date of Extraction fo	r TPH (Ga	soline)	NA	NA		
Extraction Method for	r TPH (Ga	asoline)	5030	5030		
Dilution Factor fo	r TPH (Ga	asoline)	1	1		
Date of Analysis	s for TPH (	(Diesel)	04-06-05	04-06-05		
Date of Extraction	n for TPH (	(Diesel)	04-05-05	04-05-05		
Extraction Solven	t for TPH (	(Diesel)	Hexane	Hexane		
Dilution Factor	r for TPH (	(Diesel)	1	1		
L	AB SAMP	LE I.D.		R504014- 12		
CLIE	NT SAMP	LE I.D.		MW-12		
COMPOUND		MDL	MB			
TPH-Gasoline (C4 - C12)		50	ND	1,160		
TPH-Diesel (C13 - C23)		500	ND	ND		
Surrogate	Spk Conc.	ACP%	MB %RC	%RC		
BFB (for TPH-Gasoline)	20 ppb	70-130	118	128		
Diocthyl Phthalate (for TPH-Diesel)	5 ppm	70-130	98	100		

SPK Conc.=Spiking Concentration; ACP%=Acceptable Range of Percent; %RC=% Recovery MDL=Method Detection Limit; MB=Method Blank; ND=Not Detected(Below MDL); NA=Not Analyzed



**Environmental Laboratories** 

#### ANALYTICAL TEST RESULT (EPA 8260B)

Reporting Unit: µg/L (ppb)

DAT	E ANAI	LYZED	04-07-05	04-07-05	04-07-05	04-07-05	04-07-05	04-07-05
DATE	EXTRA	CTED						
DILU	ΓΙΟΝ FA	CTOR	1	1	1	10	2	1
T A1	LAB SAMPLE I.D			R504014-	R504014-	R504014-	R504014-	R504014-
LA				1	2	3	4	5
CLIENT SAMPLE I.D				MW-1	MW-2	MW-3	MW-4	MW-5
COMPOUND	MDL	EQL	MB					
Benzene	1	1	ND	2.3	4.0	1,970	154	69.4
Toluene	1	1	ND	1.0	30.2	773	63.3	33.7
Ethylbenzene	1	1	ND	ND	7.6	293	11.5	6.9
Total Xylenes	2	2	ND	2.4	58.7	1,240	72.4	32.2
Methyl tert-butyl Ether	2	2	ND	149	4.2	1,560	431*	108
Ethyl t-butyl Ether	2	2	ND	ND	ND	ND	ND	ND
Di-isopropyl Ether	2	2	ND	ND	ND	ND	ND	ND
T-amyl-methyl Ether	2	2	ND	ND	ND	ND	ND	ND
Tert-Butanol	10	10	ND	ND	ND	658	ND	ND
SURROGATE	SPK CONC.	ACP%	MB %RC	%RC	%RC	%RC	%RC	%RC
Dibromofluoro-methane	25ppb	70-130	74	102	84	98	102	87
Toluene-d8	25ppb	70-130	124	109	114	116	109	108
Bromofluoro-benzene	25ppb	70-130	107	110	110	105	106	104

SPK Conc.=Spiking Concentration; ACP%=Acceptable Range of Percent; %RC=% Recovery MDL=Method Detection Limit; MB=Method Blank; ND=Not Detected(Below MDL); NA=Not Analyzed; EQL=Estimated Quantification Limit J=above MDL but below EQL

<sup>\*:</sup> Obtained from a higher dilution analysis.



**Environmental Laboratories** 

#### ANALYTICAL TEST RESULT (EPA 8260B)

Reporting Unit: µg/L (ppb)

DAT	E ANAI	LYZED	04-07-05	04-07-05	04-07-05	04-07-05	04-07-05	04-07-05
DATE	EXTRA	CTED						
DILU	TION FA	CTOR	1	1	1	1	1	2
TAI	LAB SAMPLE I.D.			R504014-	R504014-	R504014-	R504014-	R504014-
LAI	LAD SAMI LE I.D.		4-6	7	8	9	10	11
CLIEN	Γ SAMP	LE I.D.	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11
COMPOUND	MDL	EQL						
Benzene	1	1	39.5	92.4	30.6	3.1	1.3	33.4
Toluene	1	1	162	ND	ND	7.4	8.2	49.8
Ethylbenzene	1	1	57.2	ND	ND	2.4	2.0	7.1
Total Xylenes	2	2	358	ND	ND	17.3	16.6	53.0
Methyl tert-butyl Ether	2	2	77.1	168	4.8	ND	75.1	66.4
Ethyl t-butyl Ether	2	2	ND	ND	ND	ND	ND	ND
Di-isopropyl Ether	2	2	ND	ND	ND	ND	ND	ND
T-amyl-methyl Ether	2	2	ND	ND	ND	ND	ND	ND
Tert-Butanol	10	10	ND	ND	ND	ND	99.3	30.8
SURROGATE	SPK CONC.	ACP%	%RC	%RC	%RC	%RC	%RC	%RC
Dibromofluoro-methane	25ppb	70-130	82	92	84	90	86	93
Toluene-d8	25ppb	70-130	115	108	112	107	110	104
Bromofluoro-benzene	25ppb	70-130	114	105	106	109	102	108

SPK Conc.=Spiking Concentration; ACP%=Acceptable Range of Percent; %RC=% Recovery MDL=Method Detection Limit; MB=Method Blank; ND=Not Detected(Below MDL); NA=Not Analyzed; EQL=Estimated Quantification Limit J=above MDL but below EQL



**Environmental Laboratories** 

#### ANALYTICAL TEST RESULT (EPA 8260B)

Reporting Unit: µg/L (ppb)

						T	
DAT	E ANAI	YZED	04-07-05	04-07-05			
DATE	EXTRA	CTED					
DILU	DILUTION FACTOR			1			
LAI	LAB SAMPLE I.D.		Blank	R504014- 12			
CLIEN	Γ SAMP	LE I.D.		MW-12			
COMPOUND	MDL	EQL	MB				
Benzene	1	1	ND	12.4			
Toluene	1	1	ND	131			
Ethylbenzene	1	1	ND	26.6			
Total Xylenes	2	2	ND	208			
Methyl tert-butyl Ether	2	2	ND	23.0			
Ethyl t-butyl Ether	2	2	ND	ND			
Di-isopropyl Ether	2	2	ND	ND			
T-amyl-methyl Ether	2	2	ND	ND			
Tert-Butanol	10	10	ND	ND			
SURROGATE	SPK CONC.	ACP%	MB %RC	%RC			
Dibromofluoro-methane	25ppb	70-130	93	71			
Toluene-d8	25ppb	70-130	104	130			
Bromofluoro-benzene	25ppb	70-130	108	117			

SPK Conc.=Spiking Concentration; ACP%=Acceptable Range of Percent; %RC=% Recovery MDL=Method Detection Limit; MB=Method Blank; ND=Not Detected(Below MDL); NA=Not Analyzed; EQL=Estimated Quantification Limit J=above MDL but below EQL



### **Environmental Laboratories**

04-11-2005

Client: Atlas Environmental Engineering Inc. Lab Job No.: R504014

Project: G & M Oil Co. #51

Project Site: 2155 S. Atlantic Blvd., Commerce, CA Date Sampled: 04-04-2005 Matrix: Date Received: 04-04-2005

### **Analytical Test Results**

Analyte	Method	Date	Reporting	Reporting Sample Results					
		Analyzed	Unit	MW-1	MW-2	MW-3	MW-4	Limit	
Methane	GC/FID	04-04-05	μg/L	ND	ND	61.5	9	5ug/L	
Nitrate	352.1	04-05-05	mg/L (ppm)	25.2	16.5	8.03	22.05	0.01 ppm	
Sulfate	375.4	04-05-05	mg/L (ppm)	33.9	30.4	18.5	50.1	1.0 ppm	
Ferrous Iron	Colori- metry	04-05-05	mg/L (ppm)	0.08	ND	1.71	0.91	0.05 ppm	

Analyte	Method	Date	Reporting		Sample	Results	Reporting	
		Analyzed	Unit	MW-5	MW-6	MW-7	MW-8	Limit
Methane	GC/FID	04-04-05	μg/L	ND	ND	ND	ND	5 μg/L
Nitrate	352.1	04-05-05	mg/L (ppm)	19.0	19.8	16.7	12.8	0.01 ppm
Sulfate	375.4	04-05-05	mg/L (ppm)	54.0	31.9	40.9	44.0	1.0 ppm
Ferrous Iron	Colori- metry	04-05-05	mg/L (ppm)	0.08	1.00	0.43	0.14	0.05 ppm

ND: Not Detected (at the specified limit).



### **Environmental Laboratories**

04-11-2005

Client: Atlas Environmental Engineering Inc. Lab Job No.: R504014

Project: G & M Oil Co. #51

Project Site: 2155 S. Atlantic Blvd., Commerce, CA Date Sampled: 04-04-2005 Matrix: Date Received: 04-04-2005

### **Analytical Test Results**

Analyte			Reporting		Sample	Results		Reporting
		Analyzed	Unit	MW-9	MW-10	MW-11	MW-12	Limit
Methane	GC/FID	04-04-05	μg/L	ND	ND	ND	ND	5ug/L
Nitrate	352.1	04-05-05	mg/L (ppm)	14.1	15.7	15.8	17.7	0.01 ppm
Sulfate	375.4	04-05-05	mg/L (ppm)	43.5	37.2	37.1	32.7	1.0 ppm
Ferrous Iron	Colori- metry	04-05-05	mg/L (ppm)	0.08	0.07	0.32	0.21	0.05 ppm

ND: Not Detected (at the specified limit).



**Environmental Laboratories** 

04-11-2005

### CH<sub>4</sub> (by GC/FID) Batch QA/QC Report

Client: Atlas Environmental Engineering Inc. Lab Job No.: R504014

Project: G & M Oil Co. #51

Matrix: Water Lab Sample ID: R504014-4
Batch No.: FD04A Analyzed Date: 04-04-2005

### I. Sample/Sample Dup Report

Reporting Units: µg/L (ppb)

Analyte	МВ	Sample Conc.	Sample Duplicate	% RPD	%RPD Accept. Limit
CH <sub>4</sub>	ND	61.5	70.5	13.6	30

#### II. LCS Result Reporting Units: µg/L (ppb)

Analyte	LCS Report Value	True Value	Rec.%	Accept. Limi
$\mathrm{CH}_4$	969	1,070	90.6	80-120

ND: Not Detected.



### **Environmental Laboratories**

Lab Job No.: R504014

QA/QC REPORT

(A). Initial Calibration

Date performed:01-11-2005Analytical Method:EPA 8260BSupply Source:AccuStandardDate of Source:11-15-2004Instrument ID:HP 5970B-ALot No.B3100219

Compound	Detec- tor	RT (min.)	CONC Unit:ppb	Area	RF	RFave	$SD_{n-1}$	%RSD
Benzene		9.87	10	66556	0.994	1.176	0.1064	9.05
		9.89	20	168083	1.300			
	MS	9.88	50	416128	1.189			
		9.89	100	839357	1.194			
		9.89	200	1656242	1.203			
Toluene		13.39	10	42375	0.633	0.713	0.0570	8.00
		13.39	20	102582	0.793			
	MS	13.39	50	248475	0.710			
		13.39	100	498605	0.710			
		13.39	200	990622	0.720			
Ethylbenzene		15.46	10	23670	0.399	0.474	0.0427	9.01
		15.46	20	57292	0.496			
	MS	15.46	50	147575	0.500			
		15.46	100	298163	0.496			
		15.46	200	599976	0.481			
M&P-Xylenes		15.60	20	56716	0.478	0.578	0.0575	9.95
<b>,</b>		15.60	40	143037	0.626			
	MS	15.59	100	353399	0.599			
		15.60	200	718862	0.598			
		15.60	400	1471240	0.589			
O-Xylene		16.06	10	26316	0.444	0.544	0.0572	10.51
.y		16.06	20	66392	0.581		3,33,2	- 5.0 1
	MS	16.06	50	162902	0.552			
		16.06	100	343814	0.572			
		16.06	200	714890	0.573			



### **Environmental Laboratories**

Lab Job No.: R504014

### QA/QC REPORT

(A). Initial Calibration

Date performed:01-11-2005Analytical Method:EPA 8260BSupply Source:AccuStandardDate of Source:11-15-2004Instrument ID:HP 5970B-ALot No.B3100219

Compound	Detec- tor	RT (min.)	CONC Unit:ppb	Area	RF	RFave	$SD_{n-1}$	%RSD
Methyl tert-butyl		6.03	40	169382	0.931	0.957	0.0671	7.01
Ether(MTBE)		6.02	80	349115	1.028			
	MS	6.02	200	801375	0.855			
		6.02	400	1810603	0.989			
		6.02	800	3482131	0.983			
Di-isoprpyl Ether		7.19	40	55872	0.209	0.213	0.0138	6.47
1 10		7.20	80	121190	0.234			
	MS	7.18	200	275363	0.197			
		7.19	400	608767	0.217			
		7.19	800	1158030	0.210			
Ethyl t-butyl Ether		7.97	40	268047	1.473	1.526	0.0974	6.38
		7.97	80	558313	1.645			
	MS	7.97	200	1303411	1.390			
		7.98	400	2849218	1.556			
		7.98	800	5545065	1.566			
T-amyl methyl		10.21	40	166780	0.622	0.651	0.0426	6.55
Ether		10.21	80	349743	0.676			
	MS	10.21	200	826583	0.590			
		10.21	400	1927526	0.686			
		10.21	800	3753078	0.682			
Tert-Butanol		4.72	100	23840	0.026	0.024	0.0026	10.89
		4.73	200	32056	0.020			
	MS	4.72	1000	101841	0.022			
		4.73	2000	222637	0.024	024		
		4.73	4000	457725	0.026			



**Environmental Laboratories** 

Lab Job No.: R504014

### I. (B). Continuing Calibration

Date Performed: 04-07-2005 Analytical Method: EPA 8260B

Compound	Detec- tor	RT	CONC Unit:ppb	Area	RF	%DIFF	ACP RGE %DIFF
Benzene	MS	9.87	50	287683	1.149	2.3	30
Toluene	MS	13.38	50	179102	0.715	0.3	30
Ethylbenzene	MS	15.46	50	97871	0.440	7.2	30
M&P-Xylenes	MS	15.59	50	239864	0.539	6.7	30
O-Xylene	MS	16.05	50	112150	0.504	7.4	30
Methyl tert-butyl Ether	MS	6.01	100	275564	0.854	10.8	30
Di-isopropyl Ether	MS	7.17	100	96850	0.194	8.9	30
Ethyl t-butyl Ether	MS	7.96	100	446284	1.384	9.3	30
T-amyl methyl Ether	MS	10.20	100	289205	0.578	11.2	30
Tert-Butanol	MS	4.71	500	41910	0.026	8.3	30



### **Environmental Laboratories**

Lab Job No.: R504014

II. Matrix Spike (MS)Matrix Spike Duplicate (MSD) Unit: µg/L (ppb)

Date Performed: 04-07-2005 Batch #: 0407-VOAW Lab Sample I.D.: R504038-2

ANALYTE	Sample Conc.	SPK Conc.	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD
1,1- Dichloroethene	ND	20	22.1	18.9	110.5	94.5	15.6	70-130	30
Benzene	ND	20	23.7	21.3	118.5	106.5	10.7	70-130	30
Trichloro-ethene	ND	20	20.4	17.9	102.0	89.5	13.1	70-130	30
Toluene	ND	20	22.1	19.2	110.5	96.0	14.0	70-130	30
Chlorobenzene	ND	20	20.1	19.3	100.5	96.5	4.1	70-130	30

III. Laboratory Quality Control Check Sample

Date performed: 04-07-2005 Analytical Method: EPA 8260B Supply Source: Supelco Lab LCS ID.: LCS/WG Lot No. LB09676 Unit: µg/L (ppb)

Date of Source: 01-11-2005

ANALYTE	LCS Report Value	True Value	Rec.%	Accept. Limit
1,1-Dichloroethene	23.1	20	115.5	80-120
Benzene	23.4	20	117.0	80-120
Trichloro-ethene	21.7	20	108.5	80-120
Toluene	21.7	20	108.5	80-120
Chlorobenzene	22.6	20	113.0	80-120

ND:Not Detected.



## **Environmental Laboratories**

Lab Job No.: R504014

#### QA/QC REPORT

I. Calibration Standard

(A). Initial Calibration

Date performed: 06-30-2004 Analytical Method: LUFT/TPH Supply Source: Shell Date of Source: 05-02-2004

Instrument ID: HP GCMS-A Lot No. NA

Compound	Detec- tor	CONC Unit:ppb	Area	RF	RFave	$SD_{n-1}$	%RSD
TPH (Gasoline)		500	11178905	3.52	2.86	0.38	15
C4-C12		1,000	17308962	2.48			
	FID	2,000	34328154	2.75			
		3,000	54526262	2.80			
		5,000	84720521	2.79			

(B). Continuing Calibration

Date performed: 04-07-2005 Analytical Method: LUFT/TPH

Analyte	Detec- tor	RT	CONC Unit:ppb	Area	RF	%DIFF	ACP RGE %DIFF
TPH (Gasoline)	FID	NA	1000	20354147	2.638	8.1	15

II. Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Unit: µg/L (ppb)

Date Performed: 04-07-2005 Batch #:AMD07-GW1 Lab Sample I.D. R504014-2

Analyte	Sample Conc.	Spike Conc.	MS	MSD	% MS	% MSD	% RPD	ACP %MS	ACP RPD
TPH-g	283	1,000	1,430	1,410	111.5	109.9	1.4	70-130	30

III. Laboratory Quality Control Check Sample

Date performed: 04-07-2005 Analytical Method: LUFT/TPH

Supply Source: Accustandard

 Lot No.:
 B0080228
 Lab LCS ID.:
 LCS/S

 Date of Source:
 01-11-2005
 Unit:
 ug/L

Analyte	Analyte SPK CONC		%RECOVERY	ACP %	
ТРН	1,000	920	92.0	80-120	

ND: Not Detect



**Environmental Laboratories** 

Lab Job No.: R504014

#### QA/QC REPORT

#### I. Calibration Standard

(A). Initial Calibration

Date performed: 11-09-2004 Analytical Method: LUFT/TPH Supply Source: Unocal Date of Source: 11-09-2004

Instrument ID: HP GC-DA Lot No. NA

Compound	Detec- tor	CONC Unit:ppm	Area	RF	RFave	$SD_{n-1}$	%RSD
ТРН		50	1488897	0.000033582	0.000063904	1.32E-05	20.6
		200	3381027	0.000059154			
C10-C23	FID	500	7920334	0.000063129			
		5000	77311440	0.000064673			
		10000	156936096	0.00006372			

(B). Continuing Calibration

Date performed: 04-06-2005 Analytical Method: LUFT/TPH

Compound	Detec- tor	RT	CONC Unit:ppm	Area	RF	%DIFF	ACP RGE %DIFF
ТРН	FID	NA	500	8012020	6.2409E-05	2.34	15

II. Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Unit: mg/L (ppm)

Date Performed: 04-06-2005 Batch #:ED06-DW1 Lab Sample I.D: ST0406-1

ANALYTE	SPK CONC	MS	MSD	% MS	% MSD	% RPD	ACP %MS	ACP RPD
ТРН	20	24.0	23.8	120.0	119.0	0.8	70-130	30

III. Laboratory Quality Control Check Sample

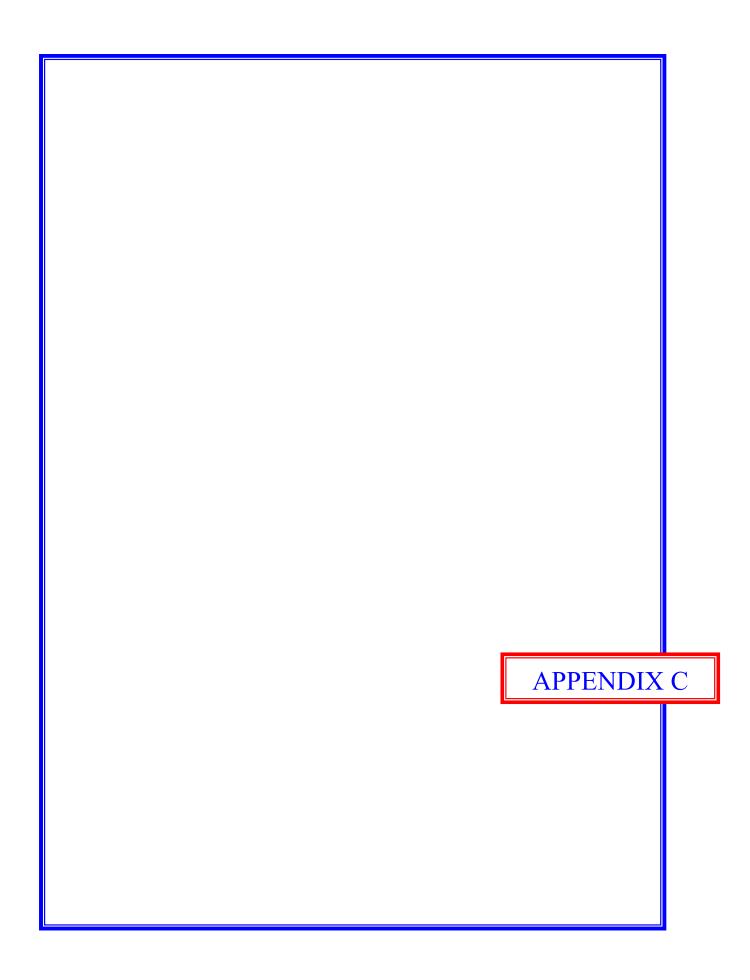
Date performed: 04-06-2005 Analytical Method: LUFT/TPH Supply Source: Unocal Lab LCS ID.: LCS/S Date of Source: 11-09-2004 Unit: mg/L

Analyte	LCS Report Value	SPK CONC	%RECOVERY	ACP %
ТРН	23.7	20.0	118.5	80-120

ND: Not Detected.

Rsoyold

		ATLAS FN	FNVIRONMENTAL		FNGINFERING	IG. INC.		CHAIN OF	- CUSTODY	OY FORM
P.O. NUMBER:	SITE/PROJECT NAME	1.51					QUARTERLY WATER SAMPLING	MPLING		SUBMIT RESULTS TO:
G&M #51		G & M C	G & M GM, CO. #51							
JOB NUMBER:	21:	SITE/PROJECT LOCATION: 2155 S. ATLANTIC BOULEVARD	T LOCATION TO BOULE	ON: VARD		ANAL	ANALYTICAL METHOD	Q		ATLAS ENVIRONMENTAL ENG. 15701 CHEMICAL LANE
G51-Q205-FV		COMMERCE, CA 90040	E, CA 900 <sup>,</sup>	40	TPHq	ТРН	8260B	METHANE		HUNTINGTON BEACH, CA 92649
SAMPLER(S) SIGNATURE	SNATURE	Sara Ju	X		Витэм	3015M	BTEX MTBE FULL SCAN	NITRATE SULFATE FERROUS IRON	Z	ATTN: CONSTANTIN TUCULESCU PHONE NO. (714) 890-7129 FAX NO. (714) 890-7149
SAMPLE NUMBER (I.D.)	YEAR 2005 DATE	TYME AM/PM	DEPTH BELOW GRADE	NO. OF CONTAINERS						REMARKS
		)	(ft)		;				9	
MW-1	20/6/2	4:36		4V-1B	×	× >	× >	××	X	= 710725
Z-MM	4/4/01	0 2		4V-1D	< >	< >	< >	<>>		
MW-5	4/4/0)	11.36		4V-1B	< ×	< ×	< ×	< ×		C = 0
MW-5	10-2-2	12:19		4V-1B	×	×	×	×		<i>y</i> • • • • • • • • • • • • • • • • • • •
9-MM	4-4-05	20:1		4V-1B	×	×	×	×		9
MW-7	4-4-05	1:36		4V-1B	×	×	×	×		has the
MW-8	4-4-05	2100		4V-1B	×	×	×	×		20
6-WW	50-4-5	2:25		4V-1B	×	×	×	×		B can
MW-10	10-4-5	23:68		4V-1B	×	×	×	×		0,1 000
vv-11	20-5-5	3:15		4V-1B	×	×	×	×		//
MW-12	10-4-5	4:00		4V-1B	×	×	×	×		1/1
SAMPI ES INTACT:			YFS 🐔	CN		REI INOUTSHED	-D	DATE/TIME	DATE/TIME	RECEIVED
SAMPLES PROPERLY COOLED:	RLY COOLE			NO.				ì		
TEMPERATURE STORED:	STORED:	202		6	RELINQUISHED	₽	(SIGNATURE)/COMPANY:		DATE/TIME	RECEIVED BY (SIGNATURE)/COMPANY:
PRESERVATIVES ADDED: YES. N. NO.	ADDED: YE	:	TYPE: HC	K	J. Children	7	TIM	50-4-6	グローカーカ	41/18
SAMPLES ACCEPTED:	TED:	Y	YES	NO	1 The	heling	(N) (N	4:15 pm	10:15 p.	
IF NOT, WHY:					RELINQUISM	ED BY (SIGNATI	RÉLINQUISHED BY (SIGNATURE)/COMPANY:		DATE/TIME	KECEIVED BY (SIGNATURE)/COMPANY:
SAMPLES PLACED IN LAB REFRIGERATOR	D IN LAB RE	FRIGERATOR		8		)				
YES\		NO R	EP. INITIA	REP. INITIALS	RELINQUISH	ED BY (SIGNATI	RELINQUISHED BY (SIGNATURE)/COMPANY:	DATE/TIME	DATE/TIME	RECEIVED BY (SIGNATURE)/COMPANY:
LABORATORY NAME:	NAME:	STS								



			_		
Site Address: 2155 South Atlantic Boulevard, Commerc			Range	Soil Type	Velocity Range
X axis dispersivity		0 ft	0.1-10	Gravel	up to 3 ft/d
Y axis dispersivity		<b>3</b> ft	(0.33~0.65) D	11	up to 1.5 ft/d
Distance parallel to direction of GW flow		0 ft		Clean Sand	up to 1.0 ft/d
Distance perpendicular to direction of GW flow		5 ft		Fine Sand	up to 0.5 ft/d
Groundwater velocity	0.075	5 ft/day	0.01-3.0	Silty Sand	up to 0.1 ft/d
Source concentration	2.57E+09	9 ug/L	2.57E+06	Sandy Silt	0.01-0.05 ft/d
Rate of discharge	2:	5 ft <sup>2</sup> /yr	mg/L	Silty	0.01 ft/d
Discharge duration or <i>dt</i>	8.33E-02			Soil Type	Date Release Discovered
Mass discharged per unit depth ( $C_0Qdt$ )	1.52E+1			Son Type	5/26/1997
iviass discharged per unit depth (C <sub>0</sub> Qat)		_			
Distance (X <sub>2</sub> ) to DG well 2	1.52E+05	og/11 oft			Date of 1st Monit. Event
\ <del>-</del> /					5/28/2002
Distance (Y <sub>2</sub> ) perpendicular to direction of flow		7 ft			
Distance (X <sub>3</sub> ) to drinking water well	1600	0 ft			
Distance (Y <sub>3</sub> ) perpendicular to direction of flow	250	0 ft			
Maximum concentration in drinking water well	0.00	0 ug/L		1	
Time when plume reached its peak in DW well		0 days			
Time when plume first reached 5 ug/L in DW well		0 days			
Time remaining for plume to reach 5 ug/L in DW well		4 years			
Well Name	Well No	Distance(x)	Distance(y)	C (ug/L)	Time (days)
The state of the s	77 011 110	Distance(X)	Distance(y)	C (ug/L)	Time (duys)
Downgradient Well 1 at T <sub>1</sub>	MW-3	120	15	619	1883
-	141 44 -3	120	13	385	1974
$T_2$					
$T_3$				357	2045
$T_4$				590	2138
$T_5$				798	2226
$T_6$				2130	2312
$T_7$				610	2403
$T_8^{'}$				333	2500
T <sub>9</sub>				732	2606
$T_{10}$				830	2702
$T_{11}$				708	2769
$T_{12}$				70.7	2843
T <sub>13</sub>				1560	2902
$T_{14}$					
$T_{15}$					
$T_{16}$					
T <sub>17</sub>					
$T_{18}$					
$T_{19}$					
Date of Last Record	4/4/2005			Date of First Record	
Downgradient Well 2 at T <sub>1</sub>	MW-12	180	17	73.3	2606
$T_2$				23.7	2702
$T_3$				138	2769
T <sub>4</sub>				125	2843
*4 T				23.5	2902
$T_5$				23.5	2902
$T_6$					
$T_7$					
$T_8$					
$T_9$					
$T_{10}$					
T <sub>11</sub>					
$T_{12}$					
$T_{13}$					
$T_{14}$					
T <sub>15</sub>					
Date of Last Record	4/4/2005			Date of First Record	5/12/2004